# LOGICK;

OR. THE

RIGHT USE OF REASON,

IN

The ENQUIRY after TRUTH.

WITH

A Variety of RULES to guard against Error, in the Affairs of Religion and Human Life, as well as in the Sciences.

By ISAAC WATTS, D. D.

A NEW EDITION,

Leeds :

PRINTED for J. BINNS,

1792.



yo

fr the Su to the

T w ne C

as th te ou of th

to an fe It

#### TO

## Sir JOHN HARTOPP, Bart.

SIR,

IT is fit the Public should receive, through your hands, what was written originally for the assistance of your younger studies, and was then presented unto you.

It was by the repeated importunities of your learned friend Mr. John Eames, that I was persuaded to revise these Rudiments of Logick; and when I had once suffered myself to begin the work, I was drawn still onward far beyond my first design, even to the neglect, or too long delay of other pressing and important demands that were upon me.

It has been my endeavour to form every part of this Treatife, both for the instruction of students, to open their way into the sciences, and for the more extensive and general service of mankind, that the Gentleman and the Christian might find their account in the perusal, as well as the Scholar. I have therefore collected and proposed the chief principles and rules of right judgment in matters of common and sacred importance, and pointed out our most frequent mistakes and prejudices in the concerns of life and religion, that we might better guard against the springs of error, guilt, and sorrow, which surround us in every state of mortality.

You know, Sir, the great design of this noble science is to rescue our reasoning powers from their unhappy slavery and darkness; and thus with all due submission and deference, it offers a humble assistance to divine Revelation. Its chief business is to relieve the natural weaknesses of

A 2

the

the mind, by some better efforts of nature; it is to diffuse a light over the understanding in our enquiries after truth, and not to furnish the tongue with debate and controversy. True Logick is not that noisy thing that deals all in diffute and wrangling, to which former ages bad debased and confined it; yet its disciples must acknowledge alfo, that they are taught to vindicate and defend the truth, as well as to fearch it out. True Logick doth not require a long detail of hard words to amufe mankind, and to puff up the mind with empty founds, and a pride of false learning; yet some distinctions and terms of art are necessary to range every idea in its proper class, and to keep our thought from confusion. The world is now grown so wife, as not to suffer this valuable art to be engrossed by the schools. In so polite and knowing an age every man of reason will covet some acquaintance with Logick, fince it renders its daily fervice to wildom and virtue, and to the affairs of common life, as well as to the sciences.

I will not presume, Sir, that this little Book is improved since its first composure, in proportion to the improvements of your manly age. But when you shall please to review it, in your retired hours, perhaps you may resemble your own memory in some of the early parts of learning: And, if you find all the additional Remarks and Rules made so familiar to you already by your own observation, that there is nothing new among them, it will be no unpleasing reslection that you have so far anticipated the present zeal and labour of,

SIR,

Your most faithful and obedient Servant,

WATTS.

fa

m

in

cul

qlu

London, Aug. 24, 1724.



fe er els

he th d, of re to we be

ce m as

nn-

afe

e-

n-

nd

b-

ted

## LOGICK:

OR,

## The RIGHT USE of REASON.

The Introduction and general Scheme.

I OGICK is the art of using reason \* well, in our Enquiries after Truth, and the Communication of it to others.

Reason \* is the glory of human nature, and one of the chief eminences whereby we are raised above our fellow-creature, the brutes, in this lower world.

Reason, as to the power and principle of it, is the common gift of God to all men; though all are not favoured with it by nature in an equal degree: but the acquired improvement of it in different men, makes a much greater distinction between them than nature has made. I could even venture to say, that the improvement of reason hath raised the learned and the prudent in the European world, almost as much above the

The word reason in this place is not confined to the mere faculty of reasoning, or inferring one thing from another, but includes all the intellectual powers of man. Hottentots, and other favages of Africa, as those favages are by nature superior to the birds, the beafts, and the fishes.

u

to

n

to

in

th

fa

ce

us

be

W

edi

err

thi

for

gro

for

Bu

fee

of 1

five

mi

fon

Now, the design of Logick is to teach us the right use of our reason, or intellectual powers, and the improvement of them in ourselves and others; this is not only necessary in order to attain any competent knowledge in the sciences, or the affairs of learning, but to govern both the greater and the meaner actions of life. It is the cultivation of our reason, by which we are better enabled to distinguish good from evil, as well as truth from falshood: and both these are matters of the highest importance, whether we regard this life or the life to come.

The pursuit and acquisition of truth is of infinite concernment to mankind. Hereby we become acquainted with the nature of things both in heaven and earth, and their various relations to each other. It is by this means we discover our duty to God and our fellow-creatures: by this we arrive at the knowledge of natural religion, and learn to confirm our faith in divine revelation, as well as to understand what is revealed. Our Wisdom, prudence, and piety, our present conduct and our future hope, are all influenced by the use of our rational powers in the search after truth.

There are feveral things that make it very necessary that our reason should have some assistance in the ex-

ercise or use of it.

The first is, the depth and difficulty of many truths, and the weakness of our reason to see far into things at once, and penetrate to the bottom of them. It was a saying among the antients, Veritus in pueto, truth lies in a well; and, to carry on this metaphor, we may very justly say, that Logick does, as it were, supply us with steps whereby we may go down to reach the water or it frames the links of a chain, whereby we may draw the water up from the bottom. Thus, by the means of many reasonings well connected together, philosophers in our age have drawn a thousand truths out of

the depths of darkness, which our fathers were utterly

unacquainted with.

e

y

e

n

S

r

f

0

7

d

d

is

-

-

le

P

of

-

rt

n

ý

70

W

18

)-

of

ie

Another thing that makes it necessary for our reason to have some affistance given it, is the difguise and false colours in which many things appear to us in this present imperfect flate. There are a thousand things which are not in reality what they appear to be, and that both in the natural and the moral world: fo the fun appears to be flat as a plate of filver, and to be less than twelve inches in diameter: the moon appears to be as big as the fun, and the rainbow appears to be a large fubftantial arch in the fky; all which are in reality gross falshoods. So, knavery puts on the face of justice; bypocrify and superstition wear the vizard of piety; deceit and evil are often cloathed in the shapes and appearances of truth and goodness. Now, Logick helps us to strip off the outward disguise of things, and to behold them and judge of them in their own nature.

There is yet a farther proof of our intellectual or rational Powers needing some affistance, and that is, because they are so frail and falliable in the present state; we are imposed upon at home as well as abroad; we are deceived by our fenses, by our imaginations, by our passions and appetites; by the authority of men, by education and custom, &c. and we are led into frequent errors, by judging according to these false and flattering principles, rather than according to the nature of things. Something of this frailty is owing to our very constitution, man being compounded of slesh and spirit; fomething of it arises from our infant state, and our growing up by finall degrees to manhood, fo that we form a thousand judgments before our reason is mature. But there is still more of it owing to our original defection from God, and the foolish and evil dispositions that are found in fallen man. So that one great part of the design of Logick is to guard us against the delufive influences of our meaner powers; to cure the mistakes of immature judgment; and to raise us, in. some measure, from the ruins of our fall.

It is evident enough from all these things, that our reason needs the assistance of art in our enquiries after truth and duty; and without some skill and diligence in forming our judgments aright, we shall be led into frequent mistakes, both in matters of science, and in matters of practice, and some of these mistakes may prove statal too.

The art of Logick, even as it affifts us to gain the knowledge of the sciences, leads us on towards virtue and happiness; for all our speculative acquaintance with things should be made subservient to our better conduct in the civil and the religious life. This is infinitely more valuable than all speculations, and a wise man

will use them chiefly for this better purpose.

All the good judgment and prudence that any man exerts in his common concerns of life, without the advantage of learning, is called natural Logick: and it is but a higher advancement, and a farther affiftance of our rational powers that is designed by, and expected from this artificial Logick.

In order to attain this, we must enquire what are the principal operations of the mind, which are put forth in the exercise of our reason: and we shall find them to be these four, (viz) perception, judgment, argumenta-

tion, and disposition.

Now, the art of Logick is composed of those observations and rules, which men have made about these four operations of the mind, perception, judgment, reasoning, and disposition, in order to assist and improve them.

I. Perceptian, conception, or apprehension, is the mere simple contemplation of things offered to our mind, without affirming or denying any thing concerning them. So we conceive or think of a horse, a tree, high, swift, slow, animal, time, motion, matter, mind, life, death, &c. The form under which these things appear to the mind, or the result of our conception or apprehension, is called an idea.

M. Judgment

by

tic

to

the

the

mi

a

ter

pol

the

po

it

un

on

ha

of the

ren

Go

tha

800

Go

ma

WO

on

are

1

y wh

uc.

II. Judgment is that operation of the mind, whereby we join two or more ideas together by one affirmation or negation, that is, we either affirm or deny this to be that. So this tree is high; that horse is not swift; the mind of man is a thinking being; mere matter has no thought belonging to it; God is just; good men are often miserable in this world; a rightcous governor will make a difference betwixt the evil and the good; which sentences are the effect of judgment, and are called propositions.

III. Argumentation or reasoning is that operation of the mind, whereby we infer one thing, i. e. one proposition, from two or more propositions premised. Or it is the drawing a conclusion, which before was either unknown, or dark, or doubtful, from some propositions which are more known and evident. So, when we have judged that matter cannot think, and that the mind of man doth think, we then infer and conclude, that therefore the mind of man is not matter.

So we judge that a just governor will make a difference between the evil and the good; we judge also that God is a just governor; and from thence we conclude, that God will make a difference betwixt the evil and the

good.

ter

nce

nto

in

ay

the

tue

ith

ua ely

nan

nan

the

l it

lo s

ed

are

rth

to

ta-

er-

efe

nt

ve

the

our on-

er,

n

This argumentation may be carried on further thus: God will one time or another make a difference between the good and the evil; but there is little or no difference made in this world; therefore there must be another world wherein this difference shall be made.

These inferences or conclusions are the effects of reafoning; and the three propositions taken all together

are called a syllogism, or argument.

IV. Disposition is that operation of the mind, whereby we put the ideas, propositions, and arguments, which we have formed concerning one subject, into uch an order as is sittest to gain the clearest knowedge of it, to retain it longest, and to explain it to others others in the best manner; or, in short, it is the ranging of our thoughts in fuch order, as is best for our own and others conception and memory. The effect of this operation is called method. This very description of the four operations of the mind, and their effects in this order, is an instance or example of method.

Now, as the art of Logick affifts our conception, fo it gives us a large and comprehensive view of the subjects we enquire into, as well as a clear and distinct knowledge of them. As it regulates our judgment and our reasoning, so it secures us from mistakes, and gives us a true and certain knowledge of things; and as it furnishes us with method, so it makes our knowledge of things both easy and regular, and guards our thoughts from confusion.

Logick is divided into four parts, according to these four operations of the mind, which it directs, and

this section as the section of accessory as will be

namental i karik i namina manana ay aka mana haribadi namina la en la dirik isanani i di kare a laga a di nakinta al-kum imma mana haribadi namina manana iki namina ilaga

-and to affectly out you continue to be comprehen should to to fee its makes employing which our men a being

(IX : II) period is the continued of the mind, wherethe rest and the there is the second control and are the second out Holem and commencer countries aver ow dain -wear bounds of also on Fault a secret of reder an indirection of hear that the complete of the complete of

. the west the conservation of the world.

The capture for an acquainter.

therefore we shall treat of it in this order.

The state of the state of the state of the state of

THE

£

in

fo of did nd nd ur

fe id

E

THE

## FIRST PART

OF

## LOGICK.

### Of Perception and Ideas.

THE first part of Logick contains observations and precepts about the first operation of the mind, perception or conception: and fince all our knowledge, how wide and large soever it grows, is founded upon our conceptions and ideas, here we shall consider.

1. The general nature of them.

2. The objects of our conception, or the archetypes or patterns of these ideas.

3. The several divisions of them.

4. The words and terms whereby our ideas are expressed.

5. General directions about our ideas.

6. Special rules to direct our conceptions.

2

ir

ti

th

th

nd

our

#### CHAP. I.

### Of the NATURE of Ideas.

FIRST, the nature of conception or perception, fhall just be mentioned, though this may feem to belong to another science rather than Logick.

Perception is that act of the mind (or, as some philosophers call it, rather a passion or impression) wherehe the mind becomes conscious of any thing. As when I see hunger, thirst, or cold, or heat; When I see a horse, tree, or a man; when I hear a human voice, or thunder, I am conscious of these things; this is called perception. If I study, meditate, wish, or fear, I am conscious of these inward acts also, and my mind perceive its own thoughts, wishes, fears, &c.

An idea is generally defined a representation of a thing in the mind; it is a representation of something that we have seen, felt, heard, &c. or been conscious of. The notion or form of a horse, a tree, or a man, which is in the mind, is called the idea of a horse, a tree, or man.

That notion of hunger, cold, found, colour, thought to wish, or fear, which is in the mind, is called the idea of hunger, cold, found, wish, &c.

It is not the outward object, or thing which is perceived, (viz.) the horse, the man, &c. nor is it the very perception or sense and feeling, viz. of hunger, a cold, &c. which is called the idea; but it is the thin as it exists in the mind by way of conception, or represent ation that is properly called the Idea, whether the object be present or absent.

<sup>\*</sup> Note, The words conception and perception are often used perception are often used perception as I have done here, because I could not embars a learner with too many distinctions; but if I were to distings them, I could say, perception is the consciousness of an object when present; conception is the forming an idea of the object wither present or absent.

As a horse, a man, a tree, are the outward objects of our perception, and the outward archetypes or patterns of our ideas; so our sensations of hunger, cold, &c. are also inward archetypes, or patterns of our ideas: but the notions or pictures of those things, as they are considered, or conceived in the mind, are precisely the ideas, that we have to do with in Logick. To see a tree, or to feel cold, is one thing; to think of, and converse about a man, a horse, hunger, or celd, is another.

Among all these ideas, such as represent bodies, are generally called images, especially if the idea of shape be included. Those inward representations which we have of spirit, thought, love, batred, cause, effect, &c. are more pure and mental ideas, belonging more especially to the mind, and carry nothing of shape or sense in them.—But I shall have occasion to speak more particularly of the original and distinction of ideas in the third Chapter. I proceed therefore now to consider the objects of our ideas.

CHAP. II.

Of the OBJECTS of Perception.

SECT. I.

Of being in general.

HE object of Perception is that which is reprefented in the idea, that which is the archetype r pattern, according to which the idea is formed; nd thus judgements, propositions, reasons, and long difourses, may all become the objects of perception; but

m to

t I.

hiloereby [ feel rfe, 1 bun-

perconeive

thin at w Tha

ught

110

t the

thin refent ne ob

barra ingui obje

B

in

is

de

is

al

0

n

m

W

th

re

ed

in this place we speak chiefly of the first and more simple objects of it, before they are joined and formed into

propositions or discourses.

Every object of our idea is called a them, whether, it be a being or not-being for not-being may be proposed to our thoughts, as well as that which has a real being. But let us first treat of beings and that in the largest extent of the word.

A being is confidered as possible, or as astual.

When it is confidered as possible, it is said to have an essence or nature; such were all things before their creation: when it is confidered as assual, then it is said to have existence also; such are all things which are created, and God himself the Creator.

Essence therefore is but the very nature of any being whether it be actually existing or no. A rose in winter

has an essence, in summer it has existence also.

Note, There is but one Being which includes existence in the very essence of it, and that is God; who therefore, actually exists by natural and eternal necessity: but the actual existence of every creature is very distinct from its essence, for it may be, or may not be,

as God pleases.

Again, Every being is considered either as subsisting in and by itself, and then it is called a substance; or it subsists in and by another, and then it is called a mode or manner of being. Though few writers allow mode to be called a being in the same perfect sense as a substance is; and some modes have evidently more of real entity or being, than others, as will appear when we come to treat of them. These things will furnish us with matter for larger discourse in the following Sections.

I.

to.

er,

g. est

an

n:

ve

nd

ng

ter

1-

ho

ef-

ry

be,

ng

or

ode

ode

ub-

eal

we

us

ec-

T.

#### SECT. II.

Of Substances and their various Kinds.

Substance is a being which can subsist by itself, without dependance upon any other created being. The notion of substance by itself gives occasion to Logicians to call it a substance. So a horse, a house, wood, stone, water, sire, a spirit, a body, an ungel, are called substances, because they depend on nothing but God for their existence.

It has been usual also in the description of substance to add, it is that which is the subject of modes or accidents; a body is the substance or subject, its shape is the mode.

But lest we be led into mistakes, let us here take notice, that when a substance is said to subsist without dependance upon another created being, all that we mean is, that it cannot be annihilated, or utterly destroyed and reduced to nothing, by any power inserior to that of our Creator; though its present particular form, nature, and properties may be altered and destroyed by many inserior causes; a horse may die and turn to dust; wood may be turned into sire, smoke, and ashes; a house into rubbish, and water into ice or vapour; but the substance or matter of which they are made still remains, though the forms and shapes of it are altered. A body may cease to be a house, or a horse, but it is a body still; and in this sense it depends only upon God for its existence.

Among substances some are thinking or conscious beings, or have a power of thought, such as the mind of man, God, angels. Some are extended, and solid, or impenetrable; that is, they have dimensions of length, breadth and depth, and have also a power of resistance or exclude every thing of the same kind from being in the same place. This is the proper character of mater or body.

B 2

As

As for the idea of space, whether it be void or full, i. e. a vacuum or a plenum, whether it be interspersed among all bodies or may be supposed to reach beyond the bounds of the creation, it is an argument too long and too hard to be disputed in this place what the nature of it is: it has been much debated whether it be a real substance, or a mere conception of the mind, whether it be the immensity of the divine nature, or the mere order of co-existent beings, whether it be the manner of our conception of the distances of bodies, or a mere nothing. Therefore I drop the mention of it here, and refer the reader to the first essay among the philosophical essays, by I. W. published 1733.

Now, if we feelude space out of our consideration there will remain but two sorts of substances in the world, i. e. matter and mind; or, as we otherwise call them, body and spirit; at least we have no ideas of any

other substances but these.\*

among

t

r

To

T

f

d

th

E

\* Recause men have different ideas and notions of substance, I thought it not proper entirely to omit all accounts of them, and

therefore have thrown them into the margin.

Some philosophers suppose that our acquaintance with matter or mind reaches no farther than the mere properties of them, and that there is a fort of unknown being, which is the substance or the fubjest by which these properties of solid extension and of cogitation are supported, and in which these properties inhere or exist. But perhaps this notion rifes only from our turning the mere abstracted or logical notion of substance or self-subsisting into the notion of a diftinet phyfical or natural being, without any necessity. Solid extention feems to me to be the very substance of matter, or of all bodies; and a power of thinking, which is always in all, feems to be the very substance of all spirits; for God himself is an intelligent aimighty power; nor is there any need to feek for any other fecret and unknown being, or abstracted substance entirely distinct from thefe, in order to support the several modes or properties of matter or mind for these two ideas are sufficient for that purpose; therefore I rather think thefe are fubftances.

It must be contest when we say, spirit is a thinking substance, and matter is an extended solid substance, we are sometimes ready to imagine that extension and solidity are but mere modes and properties of a certain substance or subject which supports them, and which we call body; and that a power of thinking is but a mere mode and property of some unknown substance or subject which supports it, and which we call spirit: but I rather take this to be a mere mistake.

rt I. full

erfed vond long

ature real

ether mere

nner nere

nere, ilofo-

tion the call

any

ong ice, I and

atter and r the

ation But Cted of a

dexf all o be gent cret

ron atter ere.

and y to rtie hich

and s it, nere

ake,

Among substances some are called simple, some are compound, whether the words be taken in a philosophical or a vulgar fense.

Simple substances, in a philosophical sense, are either spirits, which have no manner of composition in them, and in this fense God is called a simple Being; or they are the first principles of bodies, which are usually called elements, of which all other bodies are compounded:

mistake, which we are led into by the grammatical form and use of words; and perhaps our logical way of thinking by substances: and modes, as well as our grammatical way of talking by substantives;

and adjectives, help to delude us into the supposition.

However, that I may not be wanting to any of my readers, I would let them know Mr. Locke's opinion, which has obtained much in the present age, and it is this: "That our idea of any " particular substance is only such a combination of simple ideas as " represents that thing as subsisting by itself, in which the sup-" posed or confused idea of substance (such as it is) is always ready " to offer itself. It is a conjunction of ideas co-existing in such " a cause of their union, as makes the whole subject subsist by "itself, though the cause of their union be unknown; and our " peneral idea of subflance arises from the felf-subsistence of this " collection of ideas."

Now, if this notion of subffance rest here, and be considered! merely as an unknown cause of the union of properties, it is much more easy to be admitted; but if we proceed to support a fort of real, substantial, diftinct being, different from folid quantity or extension in bodies, and different from a power of thinking in spirits,. in my opinion it is the introduction of a needless scholastical notion into the real nature of things, and then fancying it to have a real existence.

Mr. Locke in his effay of Hum. Und. Book II. Chap. 22. S. 2. feems to ridicule this common idea of subflance, which men have: generally supposed to be a fort of substratum distinct from all properties whatfoever, and to be the support of all properties. Yet, in Book IV. Chap. 3. & 6. he feems to suppose there may be some such unknown substratum, which may be capable of receiving the properties both of matter and mind, (viz.) extenfion, folidity, and cogitation; for he supposes it possible for God! to add cogitation to that substance which is corporeal, and thus to cause matter to think. If this be true, then spirits (for ought we know) may be corporeal beings, or thinking bodies, which is a doctrine too favourable to the mortality of the foul. But I leave these debates to the philosophers of the age, and will not be too politive in my opinion of this abstruse subject.

See more of this argument in philosophical effays, before cited,

Effay. 2.

1

t

2

C

p

va

a e

to be all re

pounded: elements are such substances as cannot be resolved, or reduced, into two or more substances of different kinds.

The various fects of philosophers have attributed the honour of this name to various things. The peripateticks, or followers of Aristotle, made fire, air, earth, and water, to be the four elements, of which all earthly things were compounded; and they supposed the heavens to be a quintessence, or a fifth fort of body distinct from all these: but since experimental philosophy and mathematicks have been better understood this doctrine has been abundantly refuted. The chemists make spirit, falt, sulphur, water, and earth to be their five elements, because they can reduce all terrestrial things to these five : this seems to come nearer the truth; though they are not all agreed in this enumeration of elements. In short, our modern philosophers generally supposed matter or body to be one simple principle, or folid extension, which being diversified by its various shapes, quantities, motions, and fituations, makes all the varieties that are found in the universe; and therefore they make little use of the

Compound substances are made up of two or more simple substances; so every thing in this whole material creation, that can be reduced by the art of man into two or more different principles or substances, is

a compound body in the philosophical fense.

But, if we take the words simple and compound in a vulgar sense, then all those are simple substances, which are generally esteemed uniform in their natures. So every herb is called a simple; and every metal and mineral, though the Chemist perhaps may find all his several elements in each of them. So a needle is a simple body, being only made of steel; but a sword or a knife is a compound, because its hast or handle is made of materials different from the blade. So the bark of Peru, or the juice of sorrel, is a simple medicine: but when the apothecaries art has mingled several simples, together

together, it becomes a compound, as diascordium or mithridate.

The terms of pure and mixt, when applied to bodies. are much a-kin to simple and compound. So a guinea is pure gold, if it has nothing but gold in it, without any alloy, or baser metal; but if any other mineral or metal be mingled with it, it is called a mixt fubstance or body.

Substances are also divided into animate and inanimate. Animate substances are either animal or vege-

table \*.

Some of the animated substances have various organical or instrumental parts fitted for a variety of motions from place to place, and a fpring of life within themselves, as beasts, birds, fishes, and insects; these are called animals. Other animated substances are called vegetables, which have within themselves the principles of another fort of life and growth, and of various productions of leaves, flowers, and fruit, such as we see in plants, herbs, and trees.

And there are other substances, which are called inanimate, because they have no fort of life in them, as

earth, stone, air, water, &c.

There is also one fort of substance or being, which is compounded of body and mind, or a rational spirit united to an animal; fuch is mankind. Angels, or any other beings of the spiritual and invisible world, who have assumed visible shapes for a season, can hardly be reckoned among this order of compounded beings; pecause they drop their bodies, and divest themselves of those visible shapes when their particular message is performed, and thereby shew that these bodies do not elong to their natures.

SECT.

ofoood, The arth e all

ome

rt [

be

S of

the

eri-

rth,

rththe

ody

this dern o be eing

ons, id in f the

nore maman s, is

in a hich So and his

is a rd or nade rk of

but aples, ether

<sup>\*</sup> Note, Vegetables as well as animals, have gotten the name of nimated substances, because some of the ancients supposed berbs nd plants, beofts, birds, &c. to have a fort of fouls distinct from atter or body.

o

fe.

m

De:

ei

ati

ea

ett

hii

all

nal o fa

en

.

f ma

Spir erha lves

nd /

m, be

+

#### SECT. III.

Of Modes and their various Kinds, and first of essential and accidental Modes.

THE next fort of objects which are represented in our ideas, are called modes, or manners of being. A mode is that which cannot subsist in and of itself, but is always esteemed as belonging to, and subsisting by the help of some substance, which, for that reason, is called its subject. A mode must depend on that substance for its very existence and being; and that not as a being depends on its cause, (for so substances themselves depend on God their Creator;) but the very being of a mode depends on some substance for its subject, in which it is, or to which it belongs; so motion, shape, quantity, weight, are modes of body; knowledge, wit, folly, love, doubting, judging, are modes of the mind; for the one cannot subsist without body, and the other cannot subsist without mind.

Modes have their several divisions, as well as full

Itances.

I. Modes are either essential, or accidental.

An effential mode or attribute, is that which belongs to the very nature or effence of the subject wherein it is; and the subject can never have the same nature without it; such is roundness in a bowl, hardness in a stone, softness in water, vital motion in an animal, soliding in matter, thinking in a spirit; for though that piece of wood which is now a bowl may be made square, yet to roundness be taken away, it is no longer a bowl: so that

<sup>\*</sup> Note, The term mode is by some authors applied chiefly the relations or relative manners of being. But in logical treatises it is often used in a larger sense, and extends to all attribute whatsoever, and includes the most effential and inward properties as well as outward respects and relations, and reaches to assist themselves as well as manners of action.

very flesh and bones, which is now an animal, may be without life or inward motion; but if all motion be entirely gone, it is no longer an animal, but a carcass: so, if a body of matter be divested of folidity, it is a mere void space or nothing; and if spirit be entirely without thinking, I have no idea of any thing that is left in it; therefore so far as I am able to judge, consciousness must be its essential attribute\*: thus all the perfections of God are called his attributes, for he cannot be without them.

An effential mode is either primary or secondary.

A primary essential mode is the first, or chief thing that constitutes any being in its particular essence or nature, and makes it to be that which it is, and distinguishes it from all other beings: this is called the difference in the definition of things, of which hereaster; so roundness is the primary essential mode, or the difference of a bowl: the meeting of two lines is the primary essential mode, or the difference of an angle: the perpendicularity of these lines to each other is the difference, or a right angle: solid extension is the primary attribute, or difference of matter: consciousness, or at east a power of thinking, is the difference, or primary attribute of a spirit + and to sear and love God is the primary attribute of a pious man.

A secondary essential mode is any other attribute of a hing, which is not of primary consideration: this is called a property: sometimes indeed it goes toward naking up the essence, especially of a complex being, of ar as we are acquainted with it; sometimes it deends upon, and follows from the essence of it; so colubility, or aptness to roll, is the property of a bowl,

tial

d in ag.\*
felf,
ling

fon, fubnot em-

very jett, pape, wit,

ind;

fub

ongs ein it iture in a

in a lidit

that very

fly to treat ibute perties

attion

<sup>\*</sup> Note, When I call folid extension an effential mode or attribute of matter and a power of thinking an effential mode or attribute of spirit, I do it in compliance with common forms of speech; but erhaps in reality these are the very essences or substances themselves, and the most substantial ideas that we can frame of body and spirit, and have no need of any (we know not what) substration, or unintelligible stubstance to support them in their existence being.

<sup>†</sup> See the note in the foregoing and this page.

C.

an

gui

and

anc

are

are

proj

ogi

pet

he

ttr

hat

Cie

the

Ten

nor

Ten

rso

uc

art

uil

atio

ch

apo

s f

nd f

ral

.of

ape

and is derived from its roundness. Mobility and figure or shape are properties of matter; and it is the property

of a pious man to love his neighbour.

An accidental mode, or an accident, is fuch a mode as is not necessary to the being of a thing, for the fubject may be without it, and yet remain of the same nature that it was before; or, it is that mode which may be separated or abolished from its subject; so smoothness or roughness blackness, or whiteness, motion or rest are the accidents of a bowl; for these may be all changed, and yet the body remain a bowl still: learning, justice, folly, sickness, health, are the accidents of a man: motion, squareness, or any particular shape or fize, are the accidents of body : yet shape and fize in general are essential modes of it; for a body must have some size or shape, nor can it be without them: so hope, fear, wishing, assenting, and doubting, are accidents of the mind, though thinking in general feems to be effential to it.

Here observe, that the name of accident has been oftentimes given by the old peripatetick philosophers to all modes, whether essential or accidental; but the moderns confine this word accident to the sense in which I have described it.

Here it should be noted also, that though the word property be limited sometimes in logical treatises, to the fecondary effential mode, yet it is used in common language to signify these sour forts of modes; of which

some are effential, and some accidental.

(1.) Such as belong to every subject of that kind, but not only to those subjects. So yellow colour and dustility are properties of gold; they belong to all gold, but not only to gold; for saffron is also yellow, and lead is dustile.

not to every subject of that kind. So learning, reading, and writing, are properties of human nature; they belong only to man, but not to all men.

y

le

ie

1e

ch

fo

or

H

g, a or

in

ve

fo

ci-

to

of-

to

the

in

ord

the

an-

ich

ind,

and

old; lead

but end-

they

(3.) Such as belong to every subject of one kind, and only to them, but not always. So speech or language is a property of man, for it belongs to all men, and to men only; but men are not always speaking.

(4.) Such as belong to every subject of one kind, and to them only and always. So shape and divisibility are properties of body; so omniscience and omnipotence are properties of the divine nature; for in this sense properties and attributes are the same, and except in logical treatises there is scarce any distinction made between them. These called propria quarto modo in

he schools, or properties of the fourth fort.

Note, Where there is any one property or effential ttribute fo superior to the rest, that it appears plainly hat all the rest are derived from it, and such as is sufcient to give a full distinction of that subject from all ther subjects, this attribute or property is called the Sential difference, as is before declared; and we componly fay, the effence of the thing confifts in it; fo the Sence of matter in general seems to consist in solidity, r folid extension. But for the most part we are so such at a loss in finding out the intimate essence of articular natural bodies, that we are forced to distinwish the effential difference of most things by a combiation of properties. So a sparrow is a bird which has ch coloured feathers, and fuch a particular fize, ape, and motion. So wormwood is an herb which s fuch a leaf of fuch a colour, and shape, and taste, d fuch a root, and stalk. So beasts and fishes, mirals, metals, and works of art fometimes, as well of nature, are distinguished by such a collection of aperties.

SECT.

0

fi

it

ft

70

Ca

W

is,

fre

ch

wh

her

fut

but

we

inh

fub

any

belo

mit

piec

or fi

the

the f

it r

#### SECT. IV.

### The Farther Divisions of Mode.

II. THE second division of modes is into absolute and relative. An absolute mode is that which belongs to its subject, without respect to any other beings whatfoever: but a relative mode is derived from the regard that one being has to others. So roundness and smoothness are the absolute modes of a bowl; for if there were nothing else existing in the whole creation, a bowl might be round and smooth; but greatness and fmallness are relative modes; for the very ideas of them are derived merely from the comparison of one being with others; a bowl of four inches diameter is very great, compared with one of an inch and an half; but it is very small in comparison of another bowl, whose diameter is eighteen or twenty inches. Motion is the absolute mode of a body, but swiftness or slowness are relative ideas; for the motion of a bowl, on a bowlinggreen, is fwift, when compared with a fnail; and it is flow, when compared with a cannon bullet.

These relative modes are largely treated of by some logical and metaphisical writers under the name of relation: and these relations themselves are farther subdivided into such as arise from the nature of things, and such as arise merely from the operations of our minds; one fort are called real relations, the other mental; so the likeness of one egg to another, is a real relation, because it arises from the real nature of things; for whether there was any man or mind to conceive it or no, one egg would be like another: but when we consider an egg is a noun substantive in grammar, or as signified by the letters e, g, g, these are mere mental relations, and derive their very nature from the mind of man. These sort of relations are called by the schools ential rationis, or second notions, which have no real being

but by the operation of the mind.

I.

ute

ich

ner

om

res

rif

on,

em

ing

ery

but

ofe

are

ng-

it is

ela-

odi-

and ids;

; fo

be-

he-

no,

ider

fied

ions,

nan.

ntia

III. The third division of modes shews us, they are either, intrinsical or extrinsical. Intrinsical modes are conceived to be in the subject or substance, as when we say a globe is round, or swift, rolling, or at rest: or when we say, a man is tall, or learned, these are intrinsical modes: but extrinsick modes are such as arise from something that is not in the subject or substance itself; but it is a manner of being, which some substance attain by reason of something that is external or foreign to the subject; as, this globe lies within two yards of the wall; or, this man is beloved or bated. Note, such sort of modes, as this last example, are called external denominations.

IV. There is a fourth division much a-kin to this, whereby modes are said to be inherent or adherent, that is, proper or improper. Adherent or improper modes arise from the joining of some accidental substance to the chief subject, which yet may be separated from it; so when a bowl is wet, or a boy is cloathed, these are adherent modes; for the water and the cloaths are distinct substances, which adhere to the bowl or to the boy: but when we say, the bowl is swift or round; when we say the boy is strong or witty, these are proper or inherent modes, for they have a sort of in-being in the substance itself, and do not arise from the addition of any other substance to it.

V. Action and passion are modes or manners which belong to substances, and should not entirely be omitted here. When a smith with a hammer strikes a piece of iron, the hammer and the smith are both agents, or subjects of action; the one is the prime or supreme, the other the subordinate: the iron is the patient, or the subject of passion, in a philosophical sense, because it receives the operation of the agent: though this c

af

ar ar

di

for

re

na

up of

th

it bo

tit

eff

be

nio

the

are

ful

fw.

or

mo

gro

act

an

a g

mo

vai

in

ont

Scie

per

fense of the words passion and patient differs much from the vulgar meaning of them.\*

VI. The fixth division of modes may be into physical, i. e. natural, civil, moral, and supernatural. So when we consider the apostle Paul, who was a little man, a Roman by the privilege of his birth, a man of virtue or honesty, and an inspired apostle; his last stature is physical mode, his being a Roman is a civil privilege, his honesty is a moral consideration, and his being inspired is supernatural.

VII. Modes belong either to body or to spirit, or to both. Modes of body belong only to matter or to corporeal beings; and these are shape, size, situation, or place, &c. Modes of spirit belong only to minds; such are, knowledge, assent, dissent, doubting, reasoning, &c Modes which belong to both have been sometimes called mixt modes, or human modes, for these are only sound in human nature, which is compounded both of body and spirit; such are sensation, imagination, passion, &c in all which there is a concurrence of the operation both of mind and body, i. e. of animal and intellectual nature.

But the modes of body may be yet farther distinguished. Some of them are primary modes or qualities, for the belong to bodies considered in themselves, whether there were any man to take notice of them or no; such are those before-mentioned, (viz.) shape, size, situation &c. secondary qualities, or modes, are such ideas as we ascribe to bodies on account of the various impression which are made on the senses of men by them; and these are called sensible qualities, which are very numerous; such are all colours, as red, green, blue, &c. such an all sounds, as sharp, shrill, loud, hoarse; all tastes, as sweet

<sup>\*</sup> Note, Agent fignifies the doer, patient the sufferer, assion is ding, possion is suffering: agent and assion have retained their original and philosophical sense, though patient and passion have acquired different meaning in common language.

sweet, bitter, sour; all smells, whether pleasant, offenfive, or indifferent; and all tactile qualities, or fuch as affect the touch or feeling, (viz.) heat, cold, &c. These are properly called fecondary qualities, for though we are ready to conceive them as existing in the very bodies themselves which affect our fenses, yet true philofophy has most undeniably proved, that all these are really various ideas or perceptions excited in human nature, by the different impressions that bodies make upon our senses by their primary modes, i. e. by means of the different shape, size, motion, and position, of those little invisible parts that compose them. Thence it follows, that a fecondary quality, confidered as in the bodies themselves, is nothing else but a power or aptitude to produce such sensations in us: See Locke's effay on the understanding, Book II. Chap. 8.

VIII. I might add, in the last place, that as modes belong to substances, so there are some also that are but modes of other modes: for though they subsist in and by the substance, as the original subject of them, yet they are properly and directly attributed to some mode of that substance. Motion is the mode of a body; but the swiftness, or slowness of it, or its direction to the North or South, are but modes of motion. Walking is the mode or manner of man, or of a beast; but walking gracefully implies a manner or mode superadded to that action. All comparative and superlative degrees of any quality, are the modes of a mode, as swifter implies a greater measure of swiftness.

It would be too tedious here to run through all the modes, accidents, and relations at large that belong to various beings, and are copiously treated of in general in the science called metaphysicks, or more properly ontology: they are also treated of in particular in those sciences which have assumed them severally as their pro-

per subjects.

art L

from

obys.

little

an o

low

civi

d his

or to

COI.

fuch

&c.

cal

oun

bod

&c

ion

**Lua** 

hed

the

the

**fuct** 

tion

W

on

hele

us

are

reet

ins

C.

and

thi

phi a v

but

phi

mi

of

or:

nat

wh fen

blin

no

the

bel

to

or

lea

of a

oug

reli min rat

ral foe

lati

ma

lo mu

fur

#### SECT. V.

Of the ten Categories. Of Substance modified.

objects of our ideas, (viz.) substances and modes, and their various kinds: and in these last Sections we have briefly comprised the greatest part of what is necessary in the samous ten ranks of being, called the ten predicaments, or categories of Aristotle, on which there are endless volumes of discourses formed by several of his followers. But that the reader may not utterly be ignorant of them, let him know the names are these: substance, quantity, quality, relation, action, passion, where, when, situation, and cloathing. It would be mere loss of time to shew how loose, how injudicious, and even ridiculous, is this ten-fold division of things: and whatsoever farther relates to them, and which may tend to improve useful knowledge, should be sought in ontology, and in other sciences.

Besides substance and mode, some of the moderns would have us consider the substance modified, as a distinct object of our ideas; but I think there is nothing more that need be said on this subject than this, (viz.). There is some difference between a substance when it is considered with all its modes about it, or clothed in all its manners of existence, and when it is distinguished from them, and considered naked without them.

#### SECT. VI.

## Of Not-Being.

A S being is divided into fubstance and mode, so we may consider not-being with regard to both these.

I. Not-being is confidered as excluding all fubstance, and

ief

es,

ve.

e-

ch

al

ly

e:

n

he

is,

S:

ay

ht

ns.

1

ng.

.), it,

in,

h-

ve

e.

· e,

nd

Sic.

and then all modes are also necessarily excluded; and

this we call pure nibility, or mere nothing.

This nothing is taken either in a vulgar or a philosophical sense; so we say, there is nothing in the cup, in a vulgar sense, when we mean there is no liquor in it; but we cannot say there is nothing in the cup, in a strict philosophical sense, while there is air, and perhaps a million of rays of light are there.

II. Not-being, as it has relation to modes or manners of being, may be considered either as mere negation,

or as a privation.

A negation is the absence of that which does not naturally belong to the thing we are speaking of, or which has no right, obligation, or necessity to be prefent with it; as when we say a stone is inanimate, or blind, or deaf, i. e. it has no life or sight, nor hearing; nor when we say a carpenter or a sisherman is unlearned,

these are mere negations.

But a privation is the absence of what does naturally belong to the thing we are speaking of, or which ought to be present with it, as when a man or a horse is deaf, or blind, or dead, or if a physician or a divine be unlearned, these are called privations; so the sinfulness of any human action is said to be a privation; for sin is that want of conformity to the law of God, which

ought to be found in every action of man.

Note, There are some writers who make all sort of relative modes or relations, as well as all external denominations, to be mere creatures of the mind, and entia rationis, and then they rank them also under the general head of not beings; but it is my opinion, that what soever may be determined concerning mere mental relations and external denominations which seem to have something less of entity or being in them, yet there are many real relations, which ought not to be reduced to so low a class, such are the situation of bodies, their mutual distances, their particular proportions and measures, the notions of fatherhood, brotherhood, sonship,

f

f

ſ

t

C

d

a

&c. all which are relative ideas. The very effence of virtue or boliness consists in the conformity of our actions to the rule of right reason, or the law of God: the nature and essence of sincerity is the conformity of our words and actions to our thoughts, all which are mere relations; and, I think, we must not reduce such positive beings as piety, and virtue, and truth, to the rank of non-entities, which have nothing real in them, though sin (or rather the sinfulness of an action) may be properly called a not-being, for it is a want of piety and virtue. This is the most usual, and perhaps the justest way of representing these matters.

#### CHAP. III.

Of the several Sorts of Perceptions or Ideas.

IDEAS may be divided with regard to their original, their nature, their abjects, and their qualities.

#### SECT. I.

Of Senfible, Spiritual, and abstracted Ideas.

THERE has been a great controversy about the origin of ideas, (viz.) whether any of our ideas are innate or no, i. e. born with us, and naturally belonging to our minds. Mr. Locke utterly denies it; others as positively affirm it. Now, though this controversy may be compromised, by allowing that there is a sense, wherein our first ideas of some things may be said to be innate, as I have shewn in some remarks

t. T.

e of

ac:

od:

y of

are

uch

the em,

nay

iety

the

nal

the

eas

be-

it;

ere nay rks

OD

on Mr. Locke's Eslay, (which have lain long by me) yet it does not belong to this place and business to have that point debated at large, nor will it hinder our purfuit of the present work to pass it over in silence.

There is sufficient ground to say, that all our ideas, with regard to their original, may be divided into three sorts, (viz.) sensible, spiritual, and abstracted ideas.

I. Sensible or corporeal ideas, are derived originally from our senses, and from the communication which the soul has with the animal body in this present state; such are the notions we frame of all colours, sounds, tastes, sigures or shapes, and motions: for our senses, being conversant about particular sensible objects, become the occasions of several distinct perceptions in the mind, and thus we come by the ideas of yellow, white, heat, cold, soft, hard, bitter, sweet, and all those which we call sensible qualities. All the ideas which we have of body and the sensible modes and properties that belong to it, seem to be derived from sensation.

And howsoever these may be treasured up in the memory, and by the work of fancy may be encreased, diminished, compounded, divided, and diversified, (which we are ready to call our invention) yet they will derive their first nature and being from something that has been let into our minds by one or other of our senses. If I think of a golden mountain, or a sea of liquid fire, yet the single ideas of sea, fire, mountain, and gold, came into my thoughts at first by sensation;

the mind has only compounded them.

II. \* Spiritual or intellectual ideas are those which we gain by reflecting on the nature and actions of our own fouls, and turning our thoughts within ourselves, and observing what is transacted in our own minds. Such are the ideas we have of thought, assent, dissent, judging, reason, knowledge, understanding, will, love, fear, hope.

<sup>\*</sup> Here the word spiritual is used in a mere natural, and not in a religious sense.

n t

or l

[ub]

we the

the real

like

ness

are

ran

pro of l

bou

trof

çar

cor or

bot

the

con

the

rep

of J

cep

Wil

cor

ide

fer

dil

der

be

wa

fled

By fentation the foul contemplates things, as it were, out of itself, and gains corporeal representations or fenfible ideas: by reflection the foul contemplates itself and things within itself, and by this means it gains spiritual ideas, or representations of things intellectual.

Here it may be noted, though the first original of these two forts of ideas, (viz.) fensible and spiritual, may be entirely owing to these two principles, fensation and reflection, yet the recollection and fresh excitation of them may be owing to a thousand other occasions and occurrences of life. We could never inform a man who was born blind or deaf what we mean by the words yellow, blue, red, or by the words loud or shrill, nor convey any just ideas of these things to his mind, by all the powers of language, unless he has experienced those fensations of found and colour; nor could we ever gain the ideas of thought, judgment, reason, doubting, hoping, &c. by all the words that man could invent without turning our thoughts inward upon the actions of our own fouls. Yet when we once have attained these ideas by sensation and reflection, they may be excited afresh by the use of names, words, signs, or by any thing elfe that has been connected with them in our thoughts; for when two or more ideas have been affociated together, whether it be by custom or accident, or design, the one presently brings the other to mind.

III. Besides these two which we have named, there is a third sort of ideas, which are commonly called abstracted ideas, because though the original ground or occasion of them may be sensation, or reflection, or both; yet these ideas are framed by another act of the mind, which we usually call abstraction. Now the word abstraction signifies a withdrawing some parts of an idea from other parts of it, by which means such abstracted ideas are formed, as neither represent any thing corporeal or spiritual, i. e. any thing peculiar or proper to mind or body. Now these are of two kinds.

Some of these abstracted ideas are the most absolute, general and universal conceptions of things considered

I.

e,

72-

lf

1-

of

al,

a-

a-

i-

m

y

or

is

-

or

it,

ın

d

ce

y

S,

n

11

t,

e

-

r

;

1,

0

d

0

n themselves, without respect to others, such as entity or being, and not-being, effence, existence, act, power,

Substance, mode, accident, &c.

The other fort of abstracted idea is relative, as when we compare several things together, and consider merely the relations of one thing to another, entirely dropping the subject of those relations, whether they be corporeal or spiritual; such are our ideas of cause, effect, likeness, unlikeness, subject, object, identity, or sameness, and contrariety, order, and other things which are treated of in ontology.

Most of the terms of art, in several sciences may be ranked under this head of abstracted ideas, as noun, pronoun, verb, in grammar, and the feveral particles of speech, as wherefore, therefore, when, how, although, bowsoever, &c. so connexions, transitions, similitudes,

tropes, and their various forms in rhetorick.

These abstracted ideas, whether absolute or relative, cannot so properly be faid to derive their immediate complete and distinct original, either from fensation, or reflection, (1.) Because the nature and the actions both of body and spirit give us occasion to frame exactly the same ideas of essence, mode, cause, effect, likeness, contrariety, &c. Therefore these cannot be called either sensible or spiritual ideas, for they are not exact representations either of the peculiar qualities or actions of spirit or body: but seem to be a distinct kind of idea framed in the mind, to represent our most general conceptions of things, or their relations to one another, without any regard to their natures, whether they be corporeal or spiritual. And, (2.) The same general ideas, of cause and effect, likeness, &c. may be transferred to a thousand other kinds of being, whether bodily or spiritual, besides those from whence we first derived them: even those abstracted ideas, which might be first occasioned by bodies, may be as properly afterward attributed to spirits.

Now, though Mr. Locke supposes sensation and reflection to be the only two springs of all ideas, and

that

C

fu

20

2

8

tv

10

B

jo

di

W

.2

15

di

d

po

di

b

te

to

is

C

fa

le

ac

W

that these two are sufficient to surnish our minds with all that rich variety of ideas which we have; yet abstraction is certainly a different act of the mind, whence these abstracted ideas have their original; though perhaps sensation or reslection may surnish us with all the first objects and occasions whence these abstracted ideas are excited and derived. Nor in this sense and view of things, can I think Mr. Locke himself would deny my representation of the original of abstracted ideas, nor forbid them to stand for a

distinct species.

Note, Though we have divided ideas in this chapter into three forts, (viz.) sensible, spiritual, and abstracted; yet it may not be amiss just to take notice here, that as man may be called a compound substance, being made of body and mind, and the modes which arise from this composition are called mixed modes, such as sensation, passion, discourse, &c. so the ideas of this substance, or being called man, and of these mixed modes may be called mixt ideas, for they are not properly and strictly spiritual, sensible, or abstracted. See a much larger account of every part of this chapter in the philosophical essays, by I. W. Ess. 3, 4, &c.

#### SECT. II.

Of simple and complex, compound and collective Ideas.

TDEAS considered in their nature, are either fimple or

complex.

A simple idea is one uniform idea which cannot be divided or distinguished by the mind into two or more ideas; such are a multitude of our sensations, as the idea of sweet, bitter, cold, heat, white, red, blue, hard, soft, motion, rest; and perhaps extension and duration: such

rt I.

with

ab-

nal;

r us

hefe

this

inal

or a

ap-

ab-

nce,

ich

des

leas

ele

are

his

3

or

be

re

10

1,

h

fuch are also many of our spiritual ideas; such as thought, will, wish, knowledge, &c.

A complex idea, is made by joining two or more ideas together; as a fquare, a triangle, a cube, a pen, a table, reading, writing, truth, falshood, a body, a man, a horse, an angel, a heavy body, a swift horse, &c. every thing that can be divided by the mind into

two or more ideas is called complex.

Complex ideas are often considered as single and distinct beings, though they may be made up of several simple ideas; so a body, a spirit, a house, a tree, a slower.—But when several of these ideas of a different kind are joined together, which are wont to be considered, as distinct single beings, this is called a compound idea, whether these united ideas be simple or complex. So a man is compounded of body and spirit, so mithridate is a compound medicine, because it is made of so many different ingredients: this I have shewn under the doctrine of substances. And modes also may be compounded; harmony is a compound idea made up of different sounds united; so several different virtues must be united to make up the compounded idea or character, either of a hera, or a saint.

But when many ideas of the same kind are joined together, and united in one name, or under one view, it is called a collective idea, so an army, or a parliament, is a collection of man; a dictionary, or nomenclatura, is a collection of words; a flock is a collection of sheep; a forest, or grove, a collection of trees; a beap is a collection of sand, or corn, or dust, &c. a city is a collection of houses; a nosegay is a collection of flowers; a month, or a year, is a collection of days; and a thou-

fand is a collection of units.

The precise difference between a compound and collective idea is this, that a compound idea unites things of a different kind, but a collective idea of things of the same kind: though this distinction in some cases is not accurately observed, and custom oftentimes uses the word compound for collective.

SECT.

we

nat wh and

con wit

Ara

bot

gre

or

mo

the

pir no

the

1

1

t i

con

gr

con

102

F

ne

ivi

City Bri

on

bec

ira

ren,

ies

sal.

3

on

#### SECT. III.

Of universal and particular ideas, real and imaginary,

IDEAS, according to their objects, may first be divided into particular or universal.

A particular idea is that which represents one thing

only.

Sometimes the one thing is represented in a loose and indeterminate manner, as when we say, fome man, any man, one man, another man; some horse, any horse; one city, or another, which is called by the schools in-

dividuum vagum.

Sometimes the particular idea represents one thing in a determinate manner, and then it is called a fingular idea; such as Bucephalus, or Alexander's horse, Cicero the orator, Peter the apostle, the palace of Verfailles, this book, that river, the new forest, or the city of London: that idea which represents one particular determinate thing to me, is called a singular idea, whether it be simple, or complex, or compound.

The object of any particular idea, as well as the idea itself, is sometimes called an individual: so Peter is an individual man, London is an individual city. So this book, one horse, another horse, are all individuals; though the word individual is more usually limited to

one fingular, certain, and determined object.

An universal idea is that which represents a common nature agreeing to several particular things; so a horse, a man, or a book, are called universal ideas, because

they agree to all borfes, men, or books,

And I think it not amiss to intimate, in this place, that these universal ideas are formed by that act of the mind which is called abstraction, i. e. a withdrawing some part of an idea from other parts of it: for when singular ideas are first let into the mind by sensation or restection, then, in order to make them universal, we

we leave out, or drop all those peculiar and determinate characters, qualities, modes, or circumstances, which belong merely to any particular individual being, and by which it differs from other beings; and we only contemplate those properties of it, wherein it agrees

with other beings.

be

ing

ofe

an,

ſe;

in-

ing

gu-

rfe,

er-

ity

lar

he-

dea

ris

Su

ils;

to

non

rfe

ule

ace,

the

ing

hen

tion

rfal,

We

Though it must be confessed, that the name of abfracted ideas is sometimes attributed to universal ideas, both sensible or spiritual, yet this abstraction is not so
great, as when we drop out of our idea every sensible or spiritual representation, and retain nothing but the
most general and absolute conceptions of things, or
their mere relations to one another, without any regard
to their particular natures, whether they be sensible or
spiritual. And it is to this kind of conceptions, we
more properly give the name of abstracted ideas, as in
the first section of this chapter.

An universal idea is either general or special.

A general idea is called by the schools a genus; and t is one common nature agreeing to several other common natures. So animal is a genus, because it igrees to a horse, lion, whale, buttersty, which are also common ideas; so sish is a genus, because it agrees to rout, herring, crab, which are common natures also.

A special idea is called by the schools a species: it is one common nature that agrees to several singular inlividual beings; so horse is a special idea, or a species, pecause it agrees to Bucephalus, trott, and snowball.—City is a special idea, for it agrees to London, Paris,

Bristol.

Note, 1st, Some of these universals are genus's, if compared with less common natures; and they are becies's, if compared with natures more common. So ird is a genu, if compared with eagle, sparrow, raten, which are also common natures; but it is a species, if compared with the more general nature, animal. The same may be said of fish, beast, &c.

This fort of universal ideas, which may either be onsidered as a genus, or a species, is called subaltern:

U

but

or

wh

he

cid

bec

bei

enc

SI

me

cul

the

S

tur

or

fat

long

tho ev.

chi nif

**fuc** 

eve

tur

rov

hav

wit big

the

and

ma

rea

in i

ter,

nest

but the highest genus, which is never a species, is called the most general; and the lowest species, which is

never a genus, is called the most special.

It may be observed here also, that that general na. ture or property wherein one thing agrees with mol other things is called its more remote genus : fo fubstana is the remote genus of bird or beaft, because it agrees not only to all kinds of animals, but also to things inanimate, as fun, stars, clouds, metals, stones, air, water, &c. but animal is the proximate or nearest genu of bird, because it agrees to fewest other things. Those general natures which stand between the nearest and most remote are called intermediate.

Note, 2dly, In universal ideas it is proper to confi-

der their comprehension and their extension;\*

The comprehension of an idea regards all the effential modes and properties of it; fo body in its comprehension takes in folidity, figure, quantity, mobility, &c. So: bowl, in its comprehension, includes roundness, valubi-

lity, &c.

The extension of an universal idea regards all the particular kinds and fingle beings that are contained under it. So a body in its extension, includes, sun moon, flar, wood, iron, plant, animal, &c. which are feveral species, or individuals, under the general name of body. So a bowl, in its extension, includes a sucode bowl, a brass bowl, a white and black bowl, a heavy bowl, &c. and all kinds of bowls, together with a the particular individual bowls in the world.

Note, The comprehension of an idea is sometime taken in fo large a fense, as not only to include the effential attributes, but all the properties, modes, and relations whatfoever, that belong to any being, as will

appear, Chap. VI.

This account of genus and species is part of that famous doctrine of universals, which is taught in the schools, with divers other formalities belonging to it of his fort of unite

Note, The word excession here is taken in a mere logical feels and not in a physical and mathematical sense.

rt I.

cal,

Diring

na-

most

ance

Tiees

air.

enus

hole

and

onfi,

ntial resident

So a ubi-

ei i

the

fun.

are ame oden

all

mes

the

and will

fa de

for

nig

for it is in this place that they introduce difference, which is the primary effential mode and property, or the secondary essential mode, and accident or the accidental mode; and these they call the five predicables, because every thing that is affirmed concerning any being must be either the genus, the species, the difference, some property, some accident: but what farther is necessary to be said concerning these things will be mentioned when we treat of definition.

Having finished the doctrine of universal and partirular ideas, I should take notice of another division of them, which also hath respect to their objects; and that

s, they are either real or imaginary.

Real ideas, are such as have a just foundation in nature, and have real objects or examplers, which did, or do, or may actually exist, according to the present state and nature of things; such are all our ideas of long, broad, swift, slow, wood, iron, men, borses, thoughts, spirits, a cruel master, a proud beggar, a man.

even feet high.

Imaginary ideas, which are also called fantastical or chimerical, are such as are made by enlarging, diminishing, uniting, dividing real ideas in the mind, in such a manner, as no objects, or examplers, did or ever will exist, according to the present course of nature, though the several parts of these ideas are borrowed from real objects; such are the conceptions we have of a satyr, a golden mountain, a slying horse, a dog without a head, a bull less than a mouse, or a mouse as big as a bull, and a man twenty feet high.

Some of these fantustical ideas are possible, that is, they are not utterly inconsistent in the nature of things; and therefore it is within the reach of divine power to make such objects; such are most of the instances already given; but impossibles carry an utter inconsistence in the ideas which are joined; such are felf-active matter, and infinite or eternal men, a pious man without here

nesty, or heaven without boliness.

har

ou kn

of fev

fix

col

the

hav

S

yea fuf

ful or

diff or

tł

na

car

dre dir

/ei

Bu

ine

of.

itt

de

de

de a

ro

#### SECT. IV.

The Division of Ideas, with regard to their Qualities.

TDEAS, with regard to their qualities, afford us these several divitions of them. 1. They are either clear and distinct, or obscure and confused. 2. They are vulgar or learned. 3. They are perfect or imperfect. 4. They are true or false.

I. Our ideas are either clear and distinct, or obscure

and confused.

Several writers have distinguished the clear ideas from those that are distinct; and the confused ideas from those that are obscure; and it must be acknowledged, there may be some difference between them; for it is the clearness of ideas for the most part makes them distinct: and the obscurity of ideas is one thing that will always bring a sort of confusion into them. Yet when these writers come to talk largely upon this subject, and to explain and adjust their meaning with great nicety, I have generally found that they did not keep up the distinction they first designed, but they consound the one with the other. I shall therefore treat of clear or distinct ideas, as one and the same fort, and obscure or confused ideas, as another.

A clear and distinct idea is that which represents the object of the mind with full evidence and strength, and plainly distinguishes it from all other objects whatso-

ever.

An obscure and consused idea represents the object either so faintly, so imperfectly, or so mingled with other ideas, that the object of it doth not appear plain to the mind, nor purely in its own nature, nor sufficiently distinguished from other things.

When we see the sea and sky nearer at hand, we have

have a clear and distinct idea of each; but when we look far toward the horizon, especially in a misty day, our ideas of both are but obscure and confused; for we know not which is sea and which is sky. So when we look at the colours of the rain-bow, we have a clear idea of the red, the blue, the green in the middle of their leveral arches, and a distinct idea too, while the eye fixes there; but when we consider the border of those colours, they fo run into one another, that it renders their ideas confused and obscure. So the idea which we have of our brother, or our friend, whom we see daily, is clear and distinct; but when the absence of many years has injured the idea, it becomes obscure and con-

Note here, that some of our ideas may be very clear and distinct in one respect, and very obscure and confused in another. So when we speak of a chiliagonum, or a figure of a thousand angles, we have a clear and distinct rational idea of the number one thousand angles; or we can demonstrate various properties concerning t by reason: but the image or sensible idea, which we have of the figure is but confused and obscure; for we cannot precisely distinguish it by fancy from the image of a figure that has nine hundred angles, or nine hunfred and ninety. So when we speak of the infinite, livisibility of matter, we always keep in our minds a very clear and distinct idea of division and divisibility. But after we have made a little progress in dividing, ind come to parts that are far too small for the reach of our senses, then our ideas, or sensible images of these ittle bodies, become obscure and indistinct, and the dea of infinite is very obscure, imperfest, and confused.

II. Ideas are either vulgar, or learned. A vulgar dea represents to us the most obvious and sensible appearances that are contained in the object of them: put a learned idea penetrates further into the nature, properties, reasons, causes, and effects of things .--This is best illustrated by some example.

Ita

ies.

l us eihey per-

ure leas

1130

eas Wm; kes ing m.

his ith ot ey

re rt, he

ıd )i-

er le Y

e e

cei

the

oth

the

al

ty

per fir

be

for

pe

2 6

bu OU

Ro

fin

tio in

in

its ha

fa

fice

Ca

m

ye pr

th

25

P

W

P

It is a vulgar idea that we have of a rainlow, when we conceive a large arch in the clouds, made up of various colours parallel to each other; but it is a learned idea which a philosopher has when he considers it as the very reflections and refractions of fun-beams, in drops of falling rain. So it is a vulgar idea which we have of the colours of folid bodies, when we perceive them to be, as it were, a red, or blue, or green tincture of the furface of those bodies: but it is a philosophical idea when we consider the various colours to be nothing else but different sensations excited in us by the varioufly refracted rays of light, reflected on our eyes in a different manner, according to the different fize, or shape, or situation of the particles of which the surfaces of those bodies are composed. It is a vulgar idea which we have of a watch or clack, when we conceive of it as a pretty instrument, made to shew us the hour of the day: but it is a learned idea which the watchmaker has of it who knows all the feveral parts of it, the fpring, the balance, the chain, the wheels, their axles, &c. together with the various connexions and adjustments of each part, whence the exact and uniform motion of the index is derived, which points to the minute or the hour. So when a common understanding reads Virgil's Eneid, he has but a vulgar idea of that poem, yet his mind is naturally entertained with the story, and his ears with the verse: but when a critic, or a man who has skill in poefy, reads it, he has a learned idea of its peculiar beauties, he tastes and relishes a superior pleasure; he admires the Roman poet, and wishes he had known the Christian Theology, which would have furnished him with nobler materials and machines than all the heather idols.

It is with a vulgar idea that the world heholds the cartoons of Raphael at Hampton-court, and every one feels his share of pleasure and entertainment; but a painter contemplates the wonders of that Italian pencil, and fees a thousand beauties in them which the vulgar eye neglected : his learned ideas give him a trans-

cendant

et I.

vhen

P of rned

it as

, in

We

eive

nc-

ing

ari-

s in

10

ces

ich

t as

the has

ng,

to-

of

the

ur.

id,

ith.

cill

iar

he he

m

en

he

ne

2

1-

e.

fnţ, cendant delight, and yet, at the same time, discover the blemishes which the common gazer never observed.

III. Ideas are either perfect or imperfect, which are

otherwise called adequate or inadequate.

Those are adequate ideas which perfectly represent their archetypes or objects. Inadequate ideas are but a partial, or incomplete representation of those arche-

types to which they are referred.

All our simple ideas are, in some sense, adequate or perfect, because simple ideas, considered merely as our siril perceptions, have no parts in them: so we may be said to have a perfect idea of white, black, sweet, sour, length, light, motion, rest, &c. We have also a perfect idea of various figures, as a triangle, a square, a cylinder, a cube, a sphere, which are complex ideas: but our idea or image of a sigure of a thousand sides, our idea of the city of London, or the powers of a load-slone, are very imperfect, as well as all our ideas of infinite length or breadth, infinite power, wisdom or duration; for the idea of infinite is endless and ever growing, and can never be completed.

Note, 1. When we have a perfect idea of any thing in all its parts, it is called a complete idea; when in all its properties, it is called comprehensive. But when we have but an inadequate and imperfect idea, we are only said to apprehend it; therefore use the term apprehension, when we speak of our knowledge of God, who

can never be comprehended by his greatures...

Note, 2. Though there are a multitude of ideas which may be called perfect, or adequate, in a vulgar sense; yet there are scarce any ideas which are adequate, comprehensive, and complete in a philosophical sense: for there is scarce any thing in the world that we know, as to all the parts, and powers, and properties of it, in perfection. Even so plain an idea as that of a triangle has, perhaps, infinite properties belonging to it, of which we know but a few. Who can tell what are the shapes and positions of those particles, which cause all the

pea

Ron

ake

as

whe

m

S

nly

ou

dea

var

ble

vill vill

all

bm

f

he

or

ere

ft

hei

17

the variety of colours that appear on the furface of things? Who knows what are the figures of the little corpufcles that compose and distinguish different bodies? The ideas of braf, iron, gold, wood, sone, byffor, and rosemary, have an infinite variety of hidden mystel ries contained in the shape, fize, motion, and position, of the little particles, of which they are composed; and perhaps, also infinite unknown properties and powers that may be derived from them. And if we arise to the animal world, or the world of spirits, our knowledge of them must be amazingly imperfect; when there is not the least grain of fund or empty space, but has too many questions and difficulties belonging to it for the wifest philosopher upon earth to answer and terfeet of a property refolve. A suppose the de severa explinder, a cube, a Pheny which are complex ideas?

IV. Our ideas are either true or false; for an idea being the representation of a thing in the mind, it must be either a true or a false representation of it. If the idea be conformable to the object or archetype of it, it is a true idea; if not, it is a false one. Sometimes our ideas are referred to things really existing without us as their archetypes. If I fee bodies in their proper colours I have a true idea; but when a man under the jaundice fees all bodies yellow, he has a falfe idea of them. So if we see the fun or moon rising or setting, our idea represents them bigger than what they are on the meridian; and in this fende it is a falfe idea, because those heavenly bodies are all day and all night of the same bigness. Or when I see a streight staff appear crooked while it is half under the water, I say, the water gives me a false idea of it. Sometimes our ideas refer to the ideas of other men, denoted by fuch a particular word, as their archetypes: fo when I hear a protestant use the words church and sacraments, if I understand by these words, a congregation of faithful men who profels christianity, and the two ordinances, baptilm and the Lord's supper, I have a true idea of those words in the common lense of protestants: but if the man who speaks.

4

e of

ittle

bo-

Mop.

ite.

on.

and

ers,

to

w-

hen

but

to

ind

lea

uft

he

it

ur

us

0-

he

of

g,

on

fe

10

72

-

r

r

it

d

d'

1

7 13

peaks of them be a papist, he means the church of Rome and the seven sacraments, and then I have a misaken idea of those words, as spoken by him, for he as a different fense and meaning: and, in general, whenfoever I mistake the sense of any speaker or writer,

may be faid to have a falfe idea of it.

Some think that truth or falshood properly belongs nly to propositions, which shall be the subject of difourse in the second part of Logick; for, if we consider deas as mere impressions upon the mind, made by outvard objects, those impressions will ever be conformble to the laws of nature in fuch a case: the water vill make a flick appear crooked, and the borizontal air vill make the fun and moon appear bigger. And geneally where there is falfbood in ideas, there feems to be ome secret or latent proposition, where we judge falsely f things: this is more obvious were we take up he words of a writer or speaker in a mistaken sense, or we join his words to our own ideas, which are diferent from his. But after all, fince ideas are pictures f things, it cannot be very improper to pronounce hem to be true or false, according to their conformity monconformity to their examplars.

But some are the into the knowledge of coines by

seeman, to we are oftentioner led into electing on the land

by the use or abuse of sayres also. And incorder to

the lomoid of asilew to endaline hour forests bank

improviements in anowledge, it is necessary to accomin

conferred a little with and gryms. We shall oc-

dengined to again, wor with the theags which are re-

postenced in thus, in as all perc is no manner of no-

nice but we wishes froming any flavor the glifte, on blue on

French and the most writen we call the that same; non have ine latter of which there words and can-

rous melos soft tiling for som a Trummens, til on

then and or property. We and another miles appeared to

Source steps, but were more seems a proper for committees

CHAP. are as complete gotten senting are forces or who

CI

mer

hei

0

bref

blaci

her

B

hat

he

olie

hal

or i

wor

app

fim

don

taft

can

gua

our

or

be

in

fing

der

wo

tin

the

mo

da

the

if (

mo

one

feels of them being paper, he meens the chartens

Low and shie I wanger rangered, and then I have at mile

mental of those words, as speken by pini, for he

has a different fende and meaning : and, in general,

# when to each middle the fende of any freeless or writer. I may be fail to have fall for A.H.D is. Some think that truth or fall had properly belonces

Of Words and their several Divisions, together with the Advantage and Danger of them.

# wird objects, those impressions will ever be conformable to the laws of mature Trojala a case: the elegent will make a flick a flick appear crossed, and the borizontal eight

# Of Words in general, and their Ufe.

propolition, where we ludge takely

reflections, yet we convey them to each other by the means of certain founds, or written marks, which we call words; and a great part of our knowledge is both obtained and communicated by these means, which are called speech or language.

But as we are led into the knowledge of things by words, so we are oftentimes led into error, or mistake, by the use or abuse of words also. And in order to guard against such mistakes, as well as to promote our improvements in knowledge, it is necessary to acquaint ourselves a little with words and terms. We shall be-

gin with these observations.

Observ. 1. Words (whether they are spoken or written) have no natural connexion with the ideas they are designed to signify, nor with the things which are represented in those ideas. There is no manner of assimity between the sounds white in English, or blanc in French, and that colour which we call by that name; nor have the letters, of which these words are composed, any natural aptness to signify that colour rather than red or green. Words and names therefore are

mere

n li

m [

rith

II w

er-

ind

the

we

oth ich

by

ce

to ur

nt

e-

it-

re

ei-

in

;

1-

er

re

re

2

mere arbitrary figns invented by men to communicate heir thoughts or ideas to one another.

Observ. 2. If one single word were appointed to express but one simple idea, and nothing else, as white, black, fiveet, four, sharp, bitter, extension, duration,

here would be scarce any mistake about them.

But, alas! it is a common unhappines in language, hat different simple ideas are sometimes expressed by he fame word; fo the words fweet and farp are apblied both to the objects of hearing and tafting, as we hall fee hereafter; and this, perhaps, may be one caufe or foundation of obscurity and error arising from words.

Observ. 3. In communicating our complex ideas to one another, if we could join as many peculiar and appropriated words together in one found, as we join simple ideas to make one complex one, we should feldom be in danger of mistaking: when I express the taste of an apple, which we call the bitter-fweet, none can mistake what I mean.

Yet this fort of composition would make all language a most tedious and unweildy thing, fince most of our ideas are complex, and many of them have eight or ten simple ideas in them; so that the remedy would be worse than the disease; for what is now expressed in one thort word, as month, or year, would require two lines to express it. It is necessary therefore, that fingle words be invented to express complex ideas, in or-

der to make language short and useful.

But here is our great infelicity, that when fingle words fignify complex ideas, one word can never diftinctly manifest all the parts of a complex idea; and thereby it will often happen, that one man includes more or less in his idea, than another does, while he affixes the same word to it. In this case there will be danger of mistake between them, for they do not mean the same abject, though they use the same name. Sc. if one person or nation, by the word year mean twelv: months of thirty days each, i. e. three hundred and

fixty

n I

11 12

ncon

nd

0

s il

hat

nfin

om

ny l

ne :

onf

re r

ney

nce

lue

lue,

ngl

M

con

r,

ftl

an

oble

fut

et 1

ld 1

hing

th.

G

i al

th

por

1.)

cre

hic

hd

ne

om

fixty days, another intend a folar year of three hundred fixty-five days, and a third mean a lunar year, or twelve lunar months, i. e. three hundred fifty-four days, there will be a great variation and error in their account of things, unless they are well apprized of each other's meaning before hand. This is supposed to be the reason, why some ancient bistories and prophecies, and accounts of chronology, are so hard to be adjusted. And this is the true reason of so furious and endless debates on many points in divinity; the words church, worship, idolatry, repentance, faith, election, merit, grace, and many others which signify very complex ideas, are not applied to include just the same simple ideas, and the same number of them, by the various contending parties; thence arise consustion and contest.

Observ. 4. Though a single name does not certainly manifest to us all the parts of a complex idea, yet it must be acknowledged, that in many of our complex ideas, the single name may point out to us some chief property which belongs to the thing that the word signifies; especially when the word or name is traced up to its original, through several languages from whence it is borrowed. So an apostle signifies one who

is fent forth.

But this tracing of a word to its original, (which is called etymology) is sometimes a very precarious and uncertain thing: and after all, we have made but little progress towards the attainment of the full meaning of a complex idea, by knowing some one chief property of it. We know but a small part of the notion of an

apostle by knowing barely that he is fent forth.

Observ. 5. Many (if not most) of our words which are applied to moral and intellectual ideas, when traced up to the original in the learned languages, will be found to signify sensible and corporeal things: thus the words apprehension, understanding, abstraction, invention, idea, inference, prudence, religion, church, adoration, &c. have all a corporeal signification in their original. The name spirit itself signifies breath or air,

in

t I

lun-

ear,

four

heir

ach

be |

cies

ted.

les

rch.

rit,

Dlex

ple

ous

eft.

nly

t it

lex

bief

ord

ced

om

uhe

1 15

ın-

tle

of

of

an

ch

ed

be

he

71-

0-

ir

17

in

n Latin, Greek, and Hebrew: fuch is the poverty of Il languages, they are forced to use these names for ncorporeal ideas, which thing has a tendency to error

nd confusion.

Observ. 6. The last thing I shall mention that leads s into many a mistake is, the multitude of objects hat one name fornetimes fignifies: there is almost an finite variety of things and ideas both simple and omplex, beyond all the words that are invented in ny language; thence it becomes almost necessary that ne name should fignify several things. Let us but onfider the two colours of yellow and blue, if they re mingled together in any confiderable proportion, hey make a green: now there may be infinite differnces of the proportions in the mixture of yellow and lue; and yet we have only these three words, yellow, lue, and green, to fignify all of them, at least by one

ngle term.

When I use the word shore, I may intend thereby coast of land near the seas or a drain to carry off war, or a prop to support a building; and by the found f the word porter, who can tell whether I mean a an who bears burdens, or a servant who waits at a obleman's gate? The world is fruitful in the invention futenfils of life, and new characters and offices of men, et names entirely new are feldom invented; therefore d names are almost necessarily used to signify new lings, which may occasion much confusion and error the receiving and communicating of knowledge.

Give me leave to propose one single instance, whereall these notes shall be remarkably exemplified. It the word bishop, which in French is called eveque; pon which I would make these several observations. 1.) That there is no natural connexion between the cred office hereby fignified, and the letters or found hich fignify this office; for both these words eveque hd bishop signify the same office, though there is not ne letter alike in them; nor have the letters which empose the English or the French word any thing

facred

facred belonging to them, more than the letters that compose the words king or foldier. (2.) If the mean. ing of a word could be learned by its derivation of etymology, yet the original derivation of words is of tentimes very dark and unsearchable; for who would imagine that each of these words are derived from the Latin Episcopus, or the Greek Επισκοπ ? Yet in this instance we happen to know certainly the true de. rivation; the French being anciently writ evelque, is borrowed from the first part of the Latin word; and the old English biscop from the middle of it. (3.) The original Greek word fignifies an overlooker, or one who stands higher than his fellows and overlooks them: it is a compound word, that primarily fignifies fensible ideas, translated to fignify or include several moral or intellectual ideas; therefore all will grant that the nature of the office can be never known by the mere found or sense of the word overlooker. (4.) I add farther, the word bishop or episcopus, even when it is thus translated from a fensible idea, to include several intellectual ideas, may yet equally fignify an overfeer of the poor; an inspector of the customs; a surveyor of the highways; a supervisor of the excise, &c. but by the confent of men, and the language of scripture, it is appropriated to fignify a facred office of the church. (5.) This very idea and name, thus translated from things sensible to fignify a spiritual and facred thing, contains but one property of it, (viz.) one that has an overfight or care over others: but it does not tell us whether it includes a care over one church, or many: over the laity or the clergy. (6.) Thence it follows, that those who, in the complex idea of the word biftop, include an overfight over the clergy, or over the whole diocese of people, a superiority to presbyters, a distinct power of ordination, &c. must necessarily disagree with those who include in it only the care of a fingle congregation. Thus, according to the various opinions of men, this word fignifies a pope, a gallican bishop, a lutherian superintendant, an English prelate, a pastor of a single affembly,

eac all l incl

the form

acc furi me

know working

fyll Var

left the min

tiv

sen

hat

an.

1 0

of.

uld

the

in

de.

. is

and

he

rho

it ible or na-

ind the

mfual or;

h-

n-

0-

his

ole ne

re

es

he

he

ht

le,

-

10

n.

is

77

le

affembly, or a presbyter or elder. Thus they quarrel each other perpetually; and it is well if any of them all have hit precisely the sense of the sacred writers, and included just the same ideas in it, and no others.

I might make all the same remarks on the word church or kirk, which is derived from Kupus out, or the house of the Lord, contracted into Kyrioik, which some suppose to signify an affembly of ebriffiant, some take it for all the world that professes christianity, and some make it to mean only the clergy, and on these accounts it has been the occasion of as many and as furious controversies as the word bishop which was mentioned before,

#### SECT. II.

## Of negative and positive Terms.

ROM these and other considerations it will follow. that if we would avoid error in our pursuit of knowledge, we must take good heed to the use of words and terms, and be acquainted with the various kinds of them.

I. Terms are either positive or negative.

Negative terms are such as have a little word or fyllable of denying joined to them, according to the various idioms of every language, as unpleasant, imprudent, immortal, irregular, ignorant, infinite, endlest, lifeless, deathless, nonsense, abyss, anonymous, where the propositions, un, im, in, non, a, an, and the termination less, fignify a negation, either in English, Latin, or Greek.

Positive terms are those which have no such negative appendices belonging to them, as life, death, end,

sense, mortal.

But

exp

ma

infi

the

So

the

the

am

teri

thir

figr

mai

in f

din

II.

wh

fuc

our

fo 1

mer

25

ma

a v

WOI

mai

tur

But so unhappily are our words and ideas linked to gether, that we can never know which are position ideas, and which are negative, by the word that it used to express them, and that for these reasons:

to fignify a negative idea; as dead is properly a thing that is derived of life; blind implies a negation or privation of fight; deaf a want of hearing; dumb a deni

of speech.

adly, There are also some negative terms which imply positive ideas, such as, immortal and deathless, which signify ever-living, or a continuance in life: insoler signifies rude and haughty: indemnify to keep safe and infinite perhaps has a positive idea too, for it is a idea ever growing; and when it is applied to God, it

tignifies his complete perfection.

3dly, There are both positive and negative terms invented to signify the same and contrary ideas; as an happy and miserable, sinless and holy, pure and undefiled impure and filthy, unkind and cruel, irreligious and profane, unforgiving, and revengeful, &c. and there is great deal of beauty and convenience derived to an language from this variety of expression; though sometimes it a little consounds our conceptions of being and not being, our positive and negative ideas.

athly, I may add also that there are some words which are negative in their original language, but seem positive to an Englishman, because the negation is unknown; as abysis, a place without a bottom; anodyne, an easing medicine; amnesty, an unremembrance, or general pardon; anarchy, a state without government; anonymous, i. e. nameless; inept, i. e. not sit; iniquit, i. e. unrighteousness; infant, one that cannot speak (viz.) a child; injurious, not doing justice or right.

The way therefore to know whether any idea be negative or not, is to consider whether it primarily implies the absence of any positive being, or mode of being; if it doth, then it is a negation or negative idea: otherwise it is a positive one, whether the word that

expresses

expresses it be positive or negative. Yet after all, in many cases this is very hard to determine, as in amnesty infinite, abys, which are originally relative terms, but they signify pardon, &c. which seem to be positives. So darkness, madness, clown, are positive terms, but they imply the want of light, the want of reason, and the want of manners; and perhaps these may be ranked among the negative ideas.

Here note, that in the English tongue two negative terms are equal to one positive, and signify the same thing, as not unhappy, signifies happy; not immortal, signifies mortal; he is no imprudent man, i. e. he is a man of prudence: but the sense and sorce of the word in such a negative way of expressions, seem to be a little

diminished.

rt ]

i to

Stib

ıt i

nad

hing

pri

ni

im

hic

olen

afe

s an

un.

iled orois a

ne-

ich

ofi-

Vn;

ing

ra

no-

ith, ak, be

rily

of

a:

hat

Tes

#### SECT. III.

### Of simple and complex Terms.

II. TERMS are divided into simple or complex.

A simple term is one word, a complex term is when more words are used to signify one thing.

Some terms are complex in words, but not in sense, such is the second Emperor of Rome; for it excites in our minds only the idea of one man, (viz.) Augustus.

Some terms are complex in sense, but not in words: fo when I say an army, a forest, I mean a multitude of men, or trees; and almost all our moral ideas, as well as many of our natural ones, are expressed in this manner; religion, piety, loyalty, knavery, thest, include a variety of ideas in each term.

There are other terms which are complex both in words and sense; so when I say a sierce dog, or a pious man, it excites an idea, not only of those two crea-

tures, but of their peculiar characters also.

E 3 Among

ar

a

m

So

le

W

fir

te

ar

te

fu

bi

ti

ba

th

al

th

I

g

21

di

E

Among the terms that are complex in fenfe, but w in words, we may reckon those simple terms which contain a primary and a secondary idea in them; when I hear my neighbour speak that which is not true and I say to him, this is not true, or this is false, I on convey to him the naked idea of his error; this is the primary idea: but if I fay it is a lie, the word carries also a secondary idea in it, for it implies both the falshood in the speech, and my reproach and con fure of the speaker. On the other hand, if I say, it a mistake, this carries also a secondary idea with it; for it not only refers to the falshood of his speech, be includes my tenderness and civility to him at the sam time. Another instance may be this; when I use the word incest, adultery, and murder, I convey to and ther not only the primary idea of those actions, bu I include also the fecondary idea of their unlawfulnes and my abhorrence of them.

Note, 1st, Hence it comes to pass, that among word which signify the same principal ideas, some are class and decent, others unclean; some chaste, others obscent some are kind, others are affronting, and reproachs because of the secondary idea which custom has affixe to them. And it is the part of a wise man, which there is a necessity of expressing any evil actions, to do it either by a word that has a secondary idea of kind ness or sosteness; or a word that carries in it an idea of rebuke and severity, according as the case requires. In when there is a necessity of expressing things unclease or obscene, a wise man will do it in the most decent language, to excite as sew uncleanly ideas as possible in

the minds of the hearers.

Note, 2dly, In length of time, and by the powers custom, words sometimes change their primary ideas as shall be declared, and sometimes they have change their secondary ideas, though the primary ideas make remain: so words that were once chaste, by frequest use, grow obscene and uncleanly; and words that were once honourable, may in the next generation grow must

irt

et N

whid

1;1

true

on

is th

rd

bot

cen

- iti

; fo

, bu

fam

e th

ano

bu

lnek

vor

clea

ene

: hfu

Tixe whe

od

kind ea o

clean lan

e

er o

nge

ma

vert nea

and

and contemptible. So the word dame originally signified a mistress of a family, who was a lady, and it is used still in the English law to signify a lady; but in common use now-a-days it represents a farmer's wise, or a mistress of a family of the lower rank in the country.— So those words of Rabshaketh, Isaiah xxxvi. 12. in our translation, (eat their own dung, &c.) were doubtless decent and clean language, when our translators wrote them above a hundred years ago. The word dung has maintained its old secondary idea and inosfensive sense to this day; but the other word in that sentence has by custom acquired a more uncleanly idea, and should now rather be changed into a more decent term, and so it should be read in public, unless it should be thought more proper to omit the sentence.\*

For this reason it is, that the Jewish Rabbins have supplied other chaste words in the margin of the Hebrew Bible, where the words of the text, through time and custom, are degenerated, so as to carry any base and unclean secondary idea in them; and they read the word which is in the margin, which they call keri, and not that which was written in the text, which

they call chetib

## SECT. IV.

MIT THE SHEET WITH THE

## Of Words common and proper.

III. WORDS and names are either common or proper. Common names are fuch as fland for universal ideas, or a whole rank of beings, whether general or special. These are called appellatives; so sist, bird, man, city, river, are common names; and so are trout, cel, lobster, for they all agree to many individuals, and some of them to many species: but Cicero, Virgil.

<sup>\*</sup> So in some places of the sacred historians, where it is written.

Every one that pisses against the wall, we should read every male.

IV

ing

as

tal

alf

to zvi

noi

kn

ful wh

bu

voc

ide

Bi

WC

bu

bu

of equ

Virgil, Buchephalus, London, Rome, Etna, the Thames, are proper names, for each of them agrees only to one

fingle being.

Note here first, that a proper name may become in fome fense common, when it hath been given to several beings of the same kind: so Cæsar, which was the proper name of the first Emperor Julius, became also a common name to all the following Emperors. And tea, which was the proper name of one fort of Indian leaf, is now-a-days become a common name for many infutions of herbs, or plants in water; as fage-tea, alchoof-tea, lemon-tea, &c. fo Peter, John, William, may be reckoned common names also, because they are given to many persons, unless they are determined to fignify a fingle person at any particular time or place.

Note in the second place, that a common name may become proper by custom, or by the time, or place, or persons that use it; as in Great-Britain, when we fay the King, we mean our present rightful sovereign King George, who now reigns; when we speak of the Prince, we intend his Royal Highness Frederick Prince of Wales: if we mention the city when we are near London; we generally mean the city of London; when in a country town, we say the parsen or the Esquire, all the parish knows who are the fingle persons intended by it; fo when we are speaking of the history of the New Testament, and use the words Peter, Paul, John,

we mean those three apostles.

Note in the third place, that any common name whatsoever is made proper, by terms of particularity added to it, as the common words pope, king, horse, garden, book, knife, &c. are designed to fignify a singular idea, when we fay the present pope: the king of Great Britain; the horse that won the last plate at New-Market; the royal garden at Kenfington; this book;

that knife, &c.

t1

mei,

One

e in eral oro.

lo a

And

lian

any

tea. any

hey

ned

10

nay

ece,

we ign

the

nce

ear nen ire,

led the bn,

me

ity

fe,

n-

of

w-

k ;

#### SECT. V.

## Of concrete and abstract Terms.

IV. TYTORDS or terms are divided into abstract

and concrete.

Abstract terms fignify the mode or quality of a being, without any regard to the subject in which it is; as whiteness, roundness, length, breadth, wisdom, mor-

tality, life, death.

Concrete terms, while they express the quality, do also either express, or imply, or refer to some subject to which it belongs; as white, round, long, broad, wife, mortal, living, dead: but these are not always noun adjectives in a grammatical sense; for a fool a knave, a philosopher, and many other concretes, are substantives as well as folly, knavery, and philosophy, which are the abstract terms that belong to them.

## 

things, are called bond more, or which

## Of univeral and equiveral Words.

TXYORDS and terms are either univocal or equivocal. Univocal words are fuch as fignify but one idea, or at least but one fort of thing; equivocal words are fuch as fignify two or more different ideas, or different forts of objects. The words book, Bible, fish, house, elephant, may be called univocal words; for I know not that they fignify any thing else but those ideas to which they are generally affixed; but head is an equivocal word, for it signifies the head of a nail, or of a pin, as well as of an animal nail is an equivocal word, it is used for the nail of the hand or foot,

foot, and for an iron nail to fasten any thing. Py is equivocal, it is a piece of timber, or a swift messenger A church is a religious assembly, or the large fair build ing where they meet; and sometimes the same won means a synod of bishops or of presbyters, and in some

places it is the pope and a general council.

Here let it be noted, that when two or more work fignify the same thing, as wave and billow, mead an meadow, they are usually called synonimous words: but seems very strange, that words, which are direct contrary to each other, should sometimes represent a most the same ideas; yet thus it is in some se instances; a valuable, or an invaluable blessing; shameful, or a shameless villain; a thick skull, or a thin skulled sellow, or a mere paper skull; a man of a large conscience, little conscience, or no conscience; a famour rascal, or an infamous one: so uncertain a thing human language, whose soundation and support custom.

As words fignifying the same thing are called fynnimous; so equivocal words, or those which signiffeveral things, are called homonymous, or abiguous and when persons use such ambiguous words, with

defign to deceive, it is called equivocation.

Our simple ideas, and especially the sensible qualities furnish us with a great variety of equivocal or ambiguous words; for these being the first, and most natural ideas we have, we borrow some of their names, to signify many other ideas, both simple and complete The word sweet expresses the pleasant perceptions of almost every sense; sugar is sweet, but it hath not to same sweetness as music; nor hath music the sweetness of a rose; and a sweet prospect differs from themall: nor yet have any of these the same sweetness a discourse, counsel, or meditation hath; yet the rose Psalmist saith of a man, We took sweet counsel together and of God, my meditation of him shall be sweet. Bitter is also such an equivocal word; there is bitter wormswood, there are bitter words, there are bitter entering

ies, efs rrow it,

I

ven arr

quin ear, f it

ear ve f

The L

ran

r7

of the non 1)

ppl

und the V

ein eig

mich

rt]

iger

uild

Von

Om

ord an bu

t al

fer

bin

arg

mon

gi

yns nif

th

ties

igu ura

lex.

s d

the

eet

hen

5 25

OY2

bet!

1.-

tter

ent-

nick

ies, and a bitter cold morning. So there is a sharpes in vinegar, and there is a sharpness in pain, in rrow, and in reproach: there is a sharp eye, a sharp it, and a sharp sword: but there is not one of these ven sharpnesses, the same as another of them; and a

arp east wind is different from them all.

There are also verbs, or words of action, which are quivocal as well as nouns or names. The words to ear, to take, to come, to get, are sufficient instances sit; as when we say, to bear a burden, to bear sorw or repreach, to bear a name, to bear a grudge, to ear fruit, or to bear children: the word bear is used a very different senses: and so is the word get, when re say, to get money, to get in, to get off, to get ready, o get a stomach, and to get a cold, &c.

There is also a great deal of ambiguity in many of ne English particles, as but, before, beside, with, without, but, then, there, for, forth, above, about, &c. of which rammars and dictionaries will sufficiently inform us.

### SECT. VII.

## Various Kinds of equivocal Words.

of words and terms, which have different senses pplied to them; I shall only mention therefore a few of the most remarkable and most useful distinctions and most them.

1st, The first division of equivocal words lets us now that some are equivocal only in their found or prounciation; others are equivocal only in writing; and

thers, both in writing and in found.

Words equivocal in found only, are such as these; the ein of a bridle, which hath the same sound with the eign of a king, or a shower of rain; but all three

2

ore

enf

re

ies

bu

ut

all

ron

nin

arth

B

brin

npe

y it

30

re f

me

Her

vi

uty .

mite

war

ay y

fies

aces

rge

al b

nfe o

sth

a co

o ta

y si

ere

d pi

wa

rbs.

Thi

hoft

have different letters and distinct spelling. So might, or strength, is equivocal in sound, but differs in writing from mite, a little animal, or small piece of money. And the verb to write, has the same sound with wright a workman, right or equity, and rite or ceremony, but it is spelled very differently from them all.

Words equivocal in writing only, are such as these; to tear to pieces has the same spelling with a tear: to lead, or guide, has the same letters as lead the metal; and a bowl for recreation, is written the same way as a bowl for drinking; but the pronunciation of all these

is different.

But those words, which are most commonly and justly called equivocal, are such as are both written and pronounced the same way, and yet have different senses or ideas belonging to them; such are all the instances

which were given in the preceding fection.

Among the words which are equivocal in found only, and not in writing, there is a large field for persons who delight in jests and puns, in riddles and quibbles, to sport themselves. This sort of words is also used by wanton persons to convey lewd ideas, under the covert of expressions capable of a chaste meaning, which are called double entendres; or when persons speak falshood with a design to deceive, under the covert of truth. Though it must be confessed, that all sorts of equivocal words yield sufficient matter for such purposes.

There are many cases also, wherein an equivocal word is used for the sake of decency to cover a foul idea: for the most chaste and modest, and well-bred persons, having sometimes a necessity to speak of the things of nature, convey their ideas in the most inospensive language by this means. And indeed, the mere poverty of all languages makes it necessary to use equivocal words upon many occasions, as the common writings of men, and even the holy book of God suf-

ficiently manifest.

I

bt,

t-

of

nd

10

m

2;

to

l;

a

fe

nd

nd

es

es

y,

15

s,

ed

1e

15

)-

11

h

al

ul

d

e

e

è

n

1

2dly, Equivocal words are usually distinguished, acording to their original, into fuch, whose various enses arise from mere chance or accident, and such as re made equivocal by design; as the word bear signiies a shaggy beast, and it signifies also to bear or carry burden; this feems to be the mere effect of chance: ut if I call my dog, bear, because he is shaggy; or all one of the northern constellations by that name, rom a fancied fituation of the stars in the shape of that nimal, then it is by design that the word is made yet arther equivocal.

But because I think this common account of the oring or origin of equivocal words is too flight and nperfect, I shall reserve this subject to be treated of

y itself, and proceed to the third division.

3dly, Ambiguous or equivocal words, are such as e fometimes taken in a large and general fenfe, and metimes in a fense more strict and limited, and have fferent ideas affixed to them accordingly. Religion, virtue, taken in a large sense, includes both our uty to God and our neighbour; but in a more strict, mited, and proper fense, virtue fignifies our duty wards men, and religion our duty to God. Virtue ay yet be taken in the strictest sense, and then it sigfies power or courage, which is the sense of it in some aces of the New Testament. So grace, taken in a rge sense, means the favour of God, and all the spirial bleffings that proceed from it, (which is a frequent nse of it in the Bible) but in a limited sense, it signis the habit of holiness wrought in us by divine favour, a complex idea of the christian virtues. It may be o taken in the strictest sense; and thus it signifies y single christian virtue, as in 2 Cor. viii. 6, 7. here it is used for liberality. So a city, in a strict proper sense, means the houses inclosed within walls; in a larger fense, it reaches to all the surbs.

This larger and stricter sense of the word is used in host all the sciences, as well as in theology, and in common

ori

ger or

hi

bla

bri

tva

wa

isc

So

wi

zvi

but

on

faid

bu

lau

ed

wc

per

tig

tiv

M

me

cu

jeć

the

the

an

dig

to

fou

fen

ye

cu

d

common life. The word geography, taken in a straight sense, signifies the knowledge of the circles of the earthly globe, and the situation of the various parts the earth; when it is taken in a little larger sense, includes the knowledge of the seas also; and in the largest sense of all, it extends to the various customs habits, and governments of nations. When an astronomer uses the word star in its proper and strict sense it is applied only to the fixed stars, but in a large sense it includes the algorithms.

it includes the planets also.

This equivocal fense of words belongs also to man proper names: so Asia, taken in the largest sense, one quarter of the world; in a more limited sense signifies Natolia, or the lesser Asia; but in the stricts sense it means no more than one little province watchia, where strong the cities of Ephesus, Smyra Sardis, &c. And this is the most frequent sense of in the New Testament. Flanders and Holland, in strict sense, are but two single provinces among the seventeen; but in a large sense Holland includes seventeen;

of them, and Flanders ten.

There are also some very common and little won in all languages, that are used in a more extensive, is more limited sense; such as, all, every, whatsoever, so When the apostle says, all men have sinned, and men must die, all is taken in its most universal and extensive sense, including all mankind, Rom. v. It When he appoints prayer to be made for all men, appears by the following verses, that he restrains the word all to signify chiefly all ranks and degrees of men in all things, I Cor. x. 33. the word all is exceeding limited, for it reaches no farther than that he please all those men whom he conversed with, in all thing that were lawful.

are used in a proper or literal sense, when they a designed to signify those ideas for which they we

original

art I

Strik

rts

zse, i

n th

tom

aftro

fent

fen

man

fe,

nfe

icte

ce

yrn

of

in

th

eve

ord

da

ex I1

ny the man man ng lafe ng

priginally made, or to which they are primarily and generally annexed; but they are used in a figurative or trophical fense, when they are made to fignify some hings, which only bear either a reference or a refemplance to the primary ideas of them. So when two princes contend by their armies, we fay they are at war in a proper sense; but when we say there is a war betwixt the winds and the waves in a storm, this s called figurative, and the peculiar figure is a metaphor. So when the scriptures say, Riches make themselves wings, and flee away as an eagle towards heaven, the wings and the flight of the eagle are proper expressions; but when flight and wings are applied to riches, it is only by way of figure and metaphor. So when man is faid to repent, or laugh, or grieve, it is literally taken; but when God is said to be grieved, to repent, or laugh, &c. these are all figurative expressions, borrowed from a resemblance to mankind. And when the words Job or Efther are used to fignify those very persons, it is the literal sense of them; but when they fignify those two books of scripture, this is a figurative sense. The names of Horace, Juvenal, and Milton, are used in the same manner either for books or men

When a word, which originally signifies any particular idea or object, is attributed to several other objects not so much by way of resemblance, but rather on the account of some evident references or relation to the original idea, this is sometimes peculiarly called an analogical word; so a sound or healthy pulse; a sound digestion; sound sleep, are so called, with reference to a sound and healthy constitution; but if you speak of sound doctrine, or sound speech, this is by way of resemblance to health, and the words are metaphorical: yet many times analogy and metaphor are used promiscuously in the same sense, and not distinguished.

Here note, That the design of metaphorical language and figures of speech is not merely to represent our deas, but to represent them with vivacity, spirit,

ifta

ot I

bun

an

nd t

d fe

I.

ren

t b

th

cid

efe

2.

rio

río

c. i

th

g o efe

ne

tec

a

3.

nar

d a

Vill

ick

gni tri ella erfe

64

affection, and power; and though they often make a deeper impression on the mind of the hearer, yet they do as often lead him into a mistake, if they are used a improper times and places. Therefore where the de. fign of the speaker or writer is merely to explain, to instruct, and to lead into the knowledge of naked truth, he ought, for the most part, to use plain and proper words, if the language affords them, and not to deal much in figurative speech. But this fort of terms is used very profitably by poets and orators, whole business is to move, and persuade, and work on the passions, as well as on the understanding. Figures are also happily employed in proverbial moral sayings by the wifest and the best of men, to impress them deeper on the memory by fensible images; and they are often used for other valuable purposes in the facred writings.

5thly, I might adjoin another fort of equivocal words; as there are some which have a different meaning in common language, from what they have in the sciences; the word passion signifies the receiving any action in a large philosophical sense; in a more limited philosophical sense, it signifies any of the affections of human nature, as love, fear, joy, sorrow, &c. but the common people confine it only to anger. So the word simple philosophically signifies single, but vulgarly it is used

for foolifb.

othly, Other equivocal words are used sometimes in an absolute sense, as when God is called perfect, which allows of no defect; and sometimes in a comparative sense, as good men are oftentimes called perfect in scripture, in comparison of those who are much inserior to them in knowledge or holiness: but I have dwelt rather too long upon this subject already, there-

fore I add no more.

SECT.

rt I.

e a

they d at

de.

and

not

t of

ofe

the

ires

ngs

em

hey

the

ds:

in

es;

na

6-

an

10n

ple

ed

in

ch

ve

in

e-

ve

.

#### SECT. VIII.

The Origin or Causes of equivocal Words.

ing ourselves and others against the dangers of issake which may arise from equivocal words, it may ot be amiss to conclude this chapter with a short account of the various ways or means whereby a word ranges its signification, or acquires any new sense, at thus becomes equivocal, especially if it keeps its d sense also.

1. Mere chance sometimes gives the same word difrent senses; as the word light signifies a body that is theavy; and it also signifies the effect of sun-beams, the medium whereby we see objects: this is merely cidental, for there seems to be no connexion between ese two senses, nor any reason for them.

2. Error and mistake is another occasion of giving rious senses to the same word; as when different rsons read the names of priest, bishop, church, easter, c. in the New Testament, they affix different ideas them, for want of acquaintance with the true meang of the sacred writer; though it must be confessed, ese various senses, which might arise at first from nest mistake may be culpably supported and propated by interest, ambition, prejudice, and party-spirit any side.

3. Time and custom alters the meaning of words.—
nave heretofore fignified a diligent servant (Gnavus;)
d a villain was a nearer tenant to the lord of the manor
Villicus;) but now both these words carry an idea of
ickedness and reproach to them. A ballad once
snified a solemnand sacred song, as well as one that
trivial, when Solomon's song was called the ballad of
allads; but now it is applied to nothing but tristing
rse, or comical subjects.

4. Words

4. Words change their sense by figures and meta. phors, which are derived from some real analogy or resemblance between several things; as when wings and flight are applied to riches, it signifies only, that the owner may as easily lose them, as he would lose a bird

And I think, under this head, we may rank those words, which signify different ideas, by a fort of an unaccountable far-setcht analogy, or distant resemblance that fancy has introduced between one thing and another; as when we say, the meat is green, when it is half roasted: we speak of airing linnen by the fire, when we mean drying or warming it: we call for round coals for the chimney, when we mean large square ones: and we talk of the wing of a rabbit, when we mean the

fore-leg: the true reason of these appellations we leave

to the critics.

who flew away with wings.

5. Words also change their sense by the special occasion of using them, the peculiar manner of pronunciation, the sound of the voice, the motion of the face, or gestures of the body, so when an angry master says to his servant, it is bravely done, or you are a fine gentleman, he means just the contrary; namely, it is very ill done; you are a sorry fellow; it is one way of giving a severe reproach, for the words are spoken by way of

sarcasm or irony.

6. Words are applied to various senses, by new ideas appearing or arising faster than new words are framed. So when gun-powder was found out, the word powder, which before signified only dust, was made then to signify that mixture or composition of nitre, charcoal, &c. and the name canon, which before signified a law or a rule, is now also given to a great gun, which gives laws to nations. So sootboys, who had frequently the common name of Jack given them, were kept to turn the spit, or to pull of their master's boots; but when instruments were invented for both these services, they were both called jacks, though one was of iron, the other of wood, and very different in their form.

7. Words

use
test
any
ally
spe

ide

the

of and

the

So in me

in

tha
cha
(fr
fhr
fhr
der

flee head four pro-

int

ori

as red mu bef nif

voc

t L

eta-

10

and

the

oird

ofe

an

mu

no.

t is

hen

oals

res:

the

ave

06-

nci-

10

to

tle-

very

ing

v oi

new

are

the

was

be-

0 1

ot-

ack

off in-

led

and

rds

7. Words alter their fignifications according to the ideas of the various persons, seets, or parties, who use them, as we have hinted before; so when a papist uses the word hereticks, he generally means the protestants; when a protestant uses the word, he means any persons who were wilfully (and perhaps contentionally) obstinate in fundamental errors. When a few speaks of the true religion, he means the institution of Moses: when a Turk mentions it, he intends the doctrine of Mahomet; but when a Christian makes use of it, he designs to signify christianity, or the truths and precepts of the gospel.

8. Words have different fignifications according to the book, writing, or discourse, in which they stand. So in a treatise of anatomy, a foot fignifies that member in the body of man: but in a book of geometry or

mensuration, it signifies twelve inches.

If I had room to exemplify most of these particulars, in one single word, I know not where to chuse a fitter than the word sound, which seems, as it were, by chance, to signify three distinct ideas, viz. healthy from sanus) as a sound body; noise, (from sonus) as a shrill sound; and to sound the sea, (perhaps from the French sonde, a probe, or an instrument to find the depth of water.) From these three, which I may call original senses, various derivative senses arise; as sound sleep, sound lungs, sound wind, and limb, a sound heart, a sound mind, sound dostrine, a sound divine, sound reason, a sound cash, sound timber, a sound respond, to beat one soundly, to sound one's meaning or inclination, and a sound or narrow sea; turn all these into Latin, and the variety will appear plain.

I confess, some sew of these which I have mentioned, as the different springs of equivocal words, may be reduced in some cases to the same original; but it must also be granted, that there may be other ways, besides these, whereby a word comes to extend its signification to include various ideas, and become equipoweal. And though it is the business of a grammarian

e

m

th

pa

be fu de

ral

ner agi

div

hi

DW

SI

hi

and

. е

at f

Ara

cre

mo

dea

best

vife

berf

pass

or u

rou

an

vife

he

ou

luai

s n

to pursue these remarks with more variety and particularity; yet it is also the works of a logician to give notice of these things, lest darkness, confusion, and perplexity, be brought into our conceptions by the means of words, and thence our judgments and reasonings become erroneous.

#### CHAP. V.

General Directions relating to our Ideas.

Direction I. TURNISH yourselves with a rich variety of idear; acquaint yourselves with things ancient and modern; things natural, civil, and religious; things domestic and national; things of your native land, and of foreign countries; things present, past, and future; and above all, be well acquainted with God and yourselves; learn animal nature, and the workings of your own spirits.

Such a general acquaintance with things will be of very great advantage.

The first benefit of it, is this; it will assist the use of reason in all its following operations; it will teach you to judge of things aright, to argue justly, and methodise your thoughts with accuracy. When you shall find several things a-kin to each other, and several different from each other, agreeing in some part of their idea, and disagreeing in other parts, you will range your ideas into better order, you will be more

easily led into a distinct knowledge of things, and will obtain a rich store of proper thoughts and arguments upon all occasions.

You will tell me, perhaps, that you design the study of the law or divinity; and what good can natural

philosophy or mathematics do you, or any other science, not directly subordinate to your chief design? But let

r-

15

-

ch

25

l,

;

;

e

-

of

(e

h

ıd

u

of

11

e

11

ts

ly

al

it

et

let it be confidered, that all sciences have a sort of mutual connexion; and knowledge of all kinds fits the mind to reason and judge better concerning any particular subject. I have known a judge upon the bench betray his ignorance, and appear a little confused in his sentiments about a case of suspected murder brought before him, for want of some acquaintance

with animal nature and philosophy.

Another benefit of it, is this; fuch a large and general acquaintance with things will fecure you from perpetual admirations and surprises, and guard you against that weakness of ignorant persons, who have never feen any thing beyond the confines of their own livelling, and therefore they wonder at almost every hing they fee; every thing beyond the smoke of their own chimney, and the reach of their own windows, s new and strange to them.

A third benefit of such an universal acquaintance with hings is this; it will keep you from being too positive and dogmatical, from an excess of credulity and unbelief, e. a readiness to believe, or to deny every thing thirst hearing; when you shall have often seen, that frange and uncommon things, which often feemed inredible, are found to be true; and things very com-

monly received have been found false.

The way of attaining such an extensive treasure of deas, is with diligence to apply yourself to read the pest books, converse with the most knowing and the visest of men, and endeavour to improve by every person in whose company you are; suffer no hour to pals away in a lazy idleness, an impertinent chattering or useless trifles: visit other cities and countries when ou have feen your own, under the care of one who an teach you to profit by travelling, and to make wife observations; indulge a little curiosity in seeing he wonders of art and nature; fearch into things ourselves, as well as learn them from others; be acluainted with men as well as books; learn all things : s much as you can at first hand; and let as many of

fo

w

lo

01

m

yc

ra

qu de

no

m

yo

ex

hi

pe

M

w

his

the

2 (

ma

140

tha

an

are

by

the

of

ma

wo

your ideas as possible be the representations of things, and not merely the representations of other mens ideas; thus your soul, like some noble building, shall be richly furnished with original paintings, and not with men copies.

Direct. II. Use the most proper methods to retain that treasure of ideas which you have acquired; for the mind is ready to let many of them slip, unless some pains and labour be taken to fix them upon the memory.

And more especially let those ideas be laid up and preserved with the greatest care, which are most directly suited, either to your eternal welfare as a Christian, or to your particular station and profession in the life; for though the former rule recommends an universal acquaintance with things, yet it is but a more general and superficial knowledge that it is require or expected of any man, in things which are uttensforeign to his own business; but it is necessary you should have a more particular and accurate acquaint ance with those things that refer to your peculia province and duty in this life, or your happiness another.

There are some persons who never arrive at an deep, solid, or valuable knowledge in any sciences any business of life, because they are perpetually statering over the surface of things in a curious and was dering search of infinite variety; ever hearing, reading, or asking after something new, but impatients any labour to lay up and preserve the ideas they have gained: their souls may be compared to a looking glast that wheresoever you turn it, it receives the images all objects, but retains none.

In order to preserve your treasure of ideas and the knowledge you have gained, pursue these advices,

specially in your younger years.

1. Recollect every day the things you have feen, heard, or read, which may have made any addition your understanding: read the writings of God 20

ert I.

ings

deas:

ichly

mere

that

mind

sand

and

ft di.

Chris-

this

uni

mon

uire

tterl

you

aint

culia

ess i

t an

ceo

Aut

wan

read

ent d

hav

gla

ges (

dt

S, 0

11,

on

1 20

me

men with diligence and perpetual reviews: be not fond of hastening to a new book, or a new chapter, till you have well fixed and established in your minds what was useful in the last: make use of your memory in this manner, and you will fenfibly experience a gradual improvement of it, while you take care not to load it to excess.

2. Talk over the things which you have feen, heard, or learned, with some proper acquaintance; this will make a fresh impression upon your memory: and if you have no fellow-student at hand, none of equal rank with yourselves, tell it over to any of your acquaintance, where you can do it with propriety and decency; and whether they learn any thing by it or not, your own repetition of it will be an improvement to yourself: and this practice also will furnish you with a variety of words and copious language, to express your thoughts upon all occasions.

3. Commit to writings fome of the most considerable improvements which you daily make, at least fuch hints as may recall them again to your mind, when perhaps they are vanished and lost. And here, I think, Mr Locke's method of adversaria, or common places, which he describes in the end of the first volume of his posthumous works, is the best, using no learned method at all, fetting down things as they occur, leaving a distinct page for each subject, and making an index

to the pages.

At the end of every week, or month, or year, you may review your remarks for these reasons: 1st, to judge of your own improvement, whan you shall find that many of your younger collections are either weak and trifling; or, if they are just and proper, yet they are grown now so familiar to you, that you will thereby see your own advancement in knowledge. And in the next place, what remarks you find there worthy of your riper observation, you may note them with a marginal star, instead of transcribing them, as being worthy of your fecond year's review, when the others are neglected.

0 1

not

wh

cie

bru

ro

nis

oll

be

re

we

wh

I

mat

ou,

in .

o t

mei

o e

in

hat

hat

our

arc

he

ielp

rop We

on

e c

he l

or,

ang

Y

To shorten something of this labour, if the books which you read are your own, mark with a pen, or pencil, the most considerable things in them which you desire to remember. Thus you may read that book the second time over with half the trouble, by your eye running over the paragraphs which your pencil has noted. It is but a very weak objection a gainst this practice to say, I shall spoil my book; for I persuade myself, that you did not buy it as a bookseller, to sell it again for gain, but as a scholar, to improve your mind by it; and if the mind be improved, your advantage is abundant, though your book yields less money to your executors.\*

Direct. III. As you proceed both in learning and in life, make a wife observation what are the ideas, what the discourses and the parts of knowledge that have been more or less useful to yourself or others. In our younger years, while we are furnishing our minds with a treafure of ideas, our experience is but finall, and our judgment weak; it is therefore impossible at that age to determine aright concerning the real advantage and usefulness of many things we learn. But when age and experience have matured your judgment, then you will gradually drop the more ufeless part of your younger furniture, and be more folicitous to retain that which is more necessary for your welfare in this life, or a better. Hereby you will come to make the same complaint that almost every learned man has done after long experience in study, and in the study of human life and religion: Alas! how many hours, and days, and months, have I lost in pursuing some parts of learn-

<sup>\*</sup> This advice of writing, marking, and revewing your marks, refer chiefly to those occasional notions you met with either in reading or in conversation; but when you are directly and professedly pursuing any subject of knowledge in a good system in your younger years, the system itself is your common-place book, and must be entirely reviewed. The same may be said concerning any treatise which closely, succincly, and accurately handles any particular theme.

rt L

ooks

1, or

hich

that

, by

your

n a.

or [

ller,

rove rour less

d in

hat

been ger

ea-

our

age

and

age

OU

ger

a ne

ter

an

n-

g,

cs,

in

nr A

1-

ing, and in reading some authors, which have turned to no other account, but to inform me, that they were not worth my labour and pursuit! Happy is rhe man who has a wise tutor to conduct him through all the ciences in the first years of his study: and who has a brudent friend always at hand to point out to him, from experience, how much of every science is worth his pursuit! and happy the student that is so wise as to follow such advice!

Direct. IV. Learn to acquire a government over your ideas and your thoughts, that they may come when they are called, and depart when they are bidden. There are some thoughts that arise and intrude upon us while we shun them; there are others that sly from us, when we would hold and fix them.

If the ideas which you would willingly make the natter of your present meditation are ready to fly from ou, you must be obstinate in the pursuit of them by in habit of fixed meditation; you must keep your foul to the work, when it is ready to fart at every moment, unless you will abandon yourself to be a slave o every wild imagination. It is a common, but it is in unhappy and a shameful thing, that every trifle that comes across the senses or fancy should divert us, hat a buzzing fly should teaze our spirits, and scatter bur best ideas: but we must learn to be deaf and re-. ardless of other things, besides that which we make he present subject of our meditation: and in order to elp a wandering and fickle humour, it is useful to have a book or paper in our hands which has fome proper hints of the object that we defign to pursue. We must be resolute and laborious, and sometimes conflict with ourselves if we would be wise and learned.

Yet I would not be too severe in this rule: it must be confessed there are seasons when the mind, or rather he brain is over-tired or jaded with study or thinking; or, upon some other accounts, animal nature may be anguid or cloudy, and unsit to assist the spirit in medi-

G

tation;

Ain

hin

irst

hou

dea

ot

n ji

ur

ion ion

1

2

5

hef

tation; at fuch seasons, (provided that they return not too often) it is better fometimes to yield to the present indisposition; for, if nature entirely resist, nothing can be done to the purpose, at least in that subject or sci-Then you may think it proper to give yourlest up to some hours of leisure and recreation, or useful idleness; or, if not, then turn your thoughts to tome other alluring subject, and pore no longer upon the first, till some brighter or more favourable moment arise. A student shall do more in one hour, when all things concur to invite him to any special study, than in four hours, at a dull and improper feafon.

I would also give the same advice, if some vain or worthless, or foolish idea will croud itself into your thoughts; and if you find that all your labour and wrestling cannot defend yourself from it, then diver the importunity of that which offends you, by turning your thoughts to some entertaining subject, that may amuse a little, and draw you off from the trouble. fome and imposing guest: and many a time also in such a case, when the impertinent and intruding ideas would divert from present duty, devotion and prayer have been very successful to overcome such obstinate trou-

blers of the peace and profit of the foul.

All thin orbitals of

If the natural genius and temper be too volatily fickle and wandering, fuch persons ought, in a more especial manner, to apply themselves to mathematical learning, and to begin their studies with Arithmetic and Geometry; wherein new truths, continually arising to the mind, out of the plainest and easiest principles, will allure the thoughts with incredible pleasure in the purfuit: this will give the student such a delightful taste of reasoning, as will fix his attention to the single subject which he purfues, and by degrees will cure the habitual levity of his spirit; but let him not indulge and pursue these so far, as to neglect the prime studies of his defigned profession.

not ent Can

sciseful

ome the

ents

all

han

10

Our

and

vert

itn-

that

ble.

luch ould

ave

ou-

tile

fpe-

7771-

and

g to

wil

tafte

ulge dies

AP.

## CHAP. VI.

Special Rules to direct our Conceptions of Things.

A Great part of what has been already written is designed to lay a soundation for those Rules, which may guide and regulate our conceptions of hings; this is our main business and design in the irst part of Logick. Now, if we can but direct our houghts to a just and happy manner in forming our deas of things, the other operation of the mind will not so easily be perverted; because most of our errors in judgment, and the weakness, fallacy, and mistake of our argumentation, proceed from the darkness, confusion, desect, or some other irregularity in our conceptions.

The rules to affift and direct our conceptions are

- I. Conceive of things clearly and distinctly, in their own natures.
- 2. Conceive of things completely, in all their parts.
- 3. Conceive of things comprehensively, in all their properties and relations.
- 4. Conceive of things extensively, in all their kinds.
- 5. Conceive of things orderly, or in a proper method.

G 2

SECT

n

he

we

en Vo

nd

vhi

I

hin

re

on

2

C

th

nfe

f for

In

nd nd

at v

r.

er

FV

die

### SECT. I.

Of gaining clear and distinct Ideas.

THE first rule is this: Seek after a clear and distinct conception of things, as they are in their own nature; and do not content yourselves with obscure and

confused ideas, where clearer are to be attained.

There are some things indeed whereof distinct ideas are scarce attainable, they seem to surpass the capacity of the understanding in our present state; such are the notions of eternal, immense, infinite, whether this infinity be applied to number, as an infinite multitude; to quantity, as infinite length, breadth; to power and persections, as strength, wisdom, or goodness infinite, &c. Though mathematicians in their way demonstrate several things in the doctrine of infinities; yet there are still some insolvable difficulties that attend the ideas of infinity, when it is applied to mind or body; and while it is in reality but an idea ever-growing, we cannot have so clear and distinct a conception of it as to secure us from mistakes in some of our reasoning about it.

There are many other things that belong to the material world, wherein the sharpest philosophers have not yet arrived at clear and distinct ideas, such as the particular shape, situation, contexture, motion of the small particles of minerals, metals, plants; &c. whereby their very natures and essences are distinguished from each other. Nor have we either senses or instruments sufficiently nice and accurate to find them out. There are other things in the world of spirits wherein our ideas are very dark and consused, such as their union with animal nature, the way of their assing a material beings and their converse with each other. And though it as a laudable ambition to search what may be known of these matters; yet it is a vast hindrance to

I.

na

10-

and

eas

ity

the

in-

de;

vers

inde-

yet

the

dy;

we

t as

ings

the

nave

s the

the

erefhed struout

erein their 2g 01

And ry be ce to

the

the enrichment of our understandings, if we spend too much of our time and pains among infinities and unfearchables, and those things for the investigation whereof we are not furnished with proper faculties in the present state. It is therefore of great service to he true improvement of the mind, to distinguish well between knowables and unknowables

As far as things are knowable by us, it is of excelent use to accustom ourselves to clear and distinct ideas. Now, among many other occasions of the darkness nd mistakes of our minds, there are these two things which most remarkably bring confusion into our ideas.

1. That from our infancy we have had the ideas of hings fo far connected with the ideas of words, that ve often mistake words for things, we mingle and

onfound one with the other.

2. From our youngest years we have been ever ready confider things not fo much in their own natures, as their various respects to ourselves, and chiefly to our nses; and we have also joined and mingled the ideas some things, with many other ideas to which they are bt a kin in their own natures.

In order therefore to a clear and distinct knowledge things, we must unclothe them of all these relations d mixtures, that we may contemplate them naked, d in their own natures: and distinguish the subject at we have in view from all other subjects whatsoer. Now, to perform this well, we must here coner the definition of words, and the definition of things.

## SECT. II.

## Of the Definition of Words or Names.

F we could conceive of things as angels and unbedied spirits do, without involving them in those clouds

a

n

nt

vo lo

br

ud

inc

n ,

lea:

Di

hav

not

are

lior

foo

form

or,

tha

me

of i

mer

clouds which words and language throw upon them, we should seldom be in danger of such mistakes as are perpetually committed by us in the present state; and indeed it would be of unknown advantage to us to accustom ourselves to form ideas of things without words, that we might know them in their own proper natures. But since we must use words, both to learn and to communicate most of our notions, we should do it with just rules of caution. I have already declared in part, how often, and by what mean our words become the occasions of errors in our conceptions of things. To remedy such inconveniences, we must get an exact definition of the words we make use of, i. e. we must determine precisely the sense of our words, which is

called the definition of the name.

Now a definition of the name being only a declaration in what sense the word is used, or what idea or object we mean by it, this may be expressed by any one or more of the properties, effects, or circumstances of that object, which do sufficiently distinguish it from other objects: as if I were to tell what I mean by the word air, I may fay it is that thin matter which we breathe in and breathe out continually; or, it is that fluid body in which the birds fly a little above the earth; or, it is that invisible matter which fills all places near the earth, or which immediately encompasses the globe of earth or water. So, if I would tell what I mean by light, I would fay, it is that medium whereby we fee the colour and shapes of things; or it is that which distinguishes the day from night. If I were asked what I mean by no ligion, I would answer, it is a collection of all our duting to God, if taken in a strict and limited sense; but if taken in a large sense, it is a collection of all our duties both " God and man. These are called the definitions of the name,

Note, In defining the name there is no necessity that we should be acquainted with the intimate essence of nature of the thing; for any manner of description that will but sufficiently acquaint another person what we

em,

are

and

ac-

rds,

res.

on)-

vith

art,

ome

To

rad

nust

is

tion jed

Of

om

the we

th;

erth

ght

un

the

11-

ties

ken

5 10

the

hat

or

hat

W

ean

mean by such a word, is a sufficient definition for the ame. And, on this account, a synonymous word, or mere negation of the contrary, a translation of the word nto another tongue, or a grammatical explication of it, s sometimes sufficient for this purpose: as if one would know what I mean by a sphere, I tell him it is a slobe; if he ask what is a triangle, it is that which has bree angles; or an oval is that which has the shape of an agg. Dark is that which has no light: asthma is a difficulty of breathing; a diaphoretick medicine, or a sudoriphick, is something that will provoke sweating; and an insolvent, is a man that cannot pay his debts.

Since it is the design of Logick, not only to affist us in learning, but in teaching also, it is necessary that we hould be surnished with some particular directions reating to the definitions of names, both in teaching and

learning.

#### SECT. III.

Lirections concerning the Definitions of Names.

Direct. I. I AVE a care of making use of mere words, instead of ideas, i. e. such words as have no meaning, no definition belonging to them; do not always imagine that there are ideas wheresoever there are names: for, though mankind hath so many millions of ideas more than they have names; yet so solidh and lavish are we, that too often we use some words in mere waste, and have no ideas for them; or, at least, our ideas are so exceedingly shattered and consused, broken and blended, various and unsettled, that that they can signify nothing toward the improvement of the understanding. You will find a great deal of reason for this remark, if you read the Popish Schoolmen, or the mystick Divines.

f ar

ns. noise

to th

I

tane

which for

bear feat

he t

tan

that

repe

out wit

end

ant

are

har

bus

and

con

be

hir

an

ce

de

cle

it

as

fo

Never rest satisfied therefore with mere words which have not ideas belonging to them, or at least no settled and determinate ideas. Deal not in such empty ware, whether you are a learner or a teacher; for hereby some persons have made themselves rich in words, and learned in their own esteem; whereas in reality their understandings have been poor, and they knew no.

thing.

Let me give, for instance, some of those writers or talkers who deal much in the words nature, sate, luck, chance, persection, power, life, fortune, instinct, &c. and that even in the most calm and instructive parts of their discourse; though neither they themselves not their hearers have any settled meaning under those words: and thus they build up the reasonings and infer what they please, with an ambiton of the name of learning, or of sublime elevations in religion; whereas in truth they do but amuse themselves and their admirers with swelling words of vanity, understanding neither what they say, nor whereof they affirm. But this sort of talk was reproved of old by the two chief apostles St Peter and St. Paul, I Tim. i. 7. and 2 Pet. ii. 18.

When pretenders to philosophy or good sense grow fond of this fort of learning, they dazzle and confound their weak hearers, but fall under the neglect of the wife. The Epicureans are guilty of this fault, when they ascribe the formation of this world to chance:the Aristotelians, when they say nature abbors a vacuum: the Stoicks when they talk of fate, which is superior to the gods: and the gamesters when they curse their ill luck, or hope for the favours of fortune. Whereas, if they would tell us, that by the word nature they mean the properties of any being, or the order of things established at the creation; that by the word fate, they intend the decrees of God, or the necesfary connection of influence of second causes and effects; that by the word luck or chance, they fignify the absolute negation of any determinate cause, or only their ignorance rt I.

bich

ttled

rare,

reby

and

heir

no-

or

uck,

&c.

s of

100

Ofe

in-

of

as

ers

er

of

St

W

ıd

ne

n

.

c

f any fuch cause, we should know how to converse with them, and to assent to, or dissent from their opinions. But while they slutter in the dark, and make a noise, with words which have no fixed ideas, they talk

o the wind, and can never profit.

I would make this matter a little plainer still by infances borrowed from the peripatetick philosophy, which was taught once in all the schools. The profesor fancies he has affigned the true reason, why all beaug bodies tend downward, why amber will draw feathers or straws, and the loadstone draw iron, when ne tells you, that this is done by certain gravitating and attractive qualities, which proceed from the fubfantial forms of those various bodies. He imagines that he has explained why the loadstone's \* North pole shall repel the north end of a magnetick needle, and attract the outh, when he affirms, that this is done by its sympathy, with one end of it, and its antipathy against the other Whereas, in truth, all these names of sympathy, antipathy substantial forms, and qualities, when they are put for the causes of these effects in bodies, are but hard words, which only express a learned and pompous ignorance of the true cause of natural appearances: and in this sense they are mere words without ideas.

This will evidently appear if one ask me, why a concave mirror or convex glass will burn wood in the sunbeams, or why a wedge will cleave it! and I should tell him, it is by an ustorious quality in the mirror or glass, and by a cleaving power in the wedge, arising from a certain unknown substantial form in them, whence they derive these qualities; or, if he should ask me why a clock strikes, and points to the hour? and I should say, it is by an indicating form and senorisic quality; whereas I ought to tell him how the sun-beams are collected and united by a burning-glass; whence the mechanical force of a wedge is derived; and what are the wheels

and

<sup>\*</sup> Note, Some writers call that the fouth pole of a loadstone which attracts the fouth end of the needle; but I choose to follow those who call it the north pole.

C. I

here

of th

conf

bur

o co

o di

nd

D

f t

bei

ife,

amo

ind

peci

of a

derf

and

who

I

lm

olar

nav

bùt

nan

beir

vice

tho

nan

raa we

are

Dur

cole

bot.

buc

Q

Par

and springs, the pointer and hammer, and bell whereby a clock gives notice of the time both to the eye and the ear. But these ustorious and cleaving powers, sonorous and indicating forms and qualities, do either teach the enquirer nothing at all but what he knew before, or they are mere words without ideas.\*

And there is many a man in the vulgar and in the learned world, who imagines himself deeply skilled in the controversies of divinity, whereas he has only furnished himself with a parcel of scholastick or mystick words, under some of which the authors themselves had no just ideas; and the learner when he hears, or pronounces them, hath scarce any ideas at all. Such sort of words sometimes have become matters of immortal contention, as though the gospel could not stand without them; and yet the zealot perhaps knows little more of them than he does of Shibboleth, or Higgaion, and Selah. Judges xii. 6. Psal. ix. 16.

Yet here I would lay down this caution, that there are several objects of which we have not a clear and distinct idea, much less an adequate or comprehensive one, and yet we cannot call the names of these things words without ideas: such are the infinity and eternity of God himself, the union of our own soul and body, the union of the divine and human natures in Jesus Christ, the operation of the Holy Spirit on the mind of man, &c. These ought not to be called words without ideas, for

there \* It may be objetted here, "and what does the modern philosoof pher with all his detail or mathematical numbers, and diagrams, 46 do more than this toward the folution of these difficulties? does tend downward to the center? Hath he found the certain and mechanical reasons of attraction, magnetism, &c." I answer, that the moderns have found a thousand things by applying mathematics to natural philosophy, which the ancients were ignorant of and when they use any names of this kind, viz. gravitation, attraction, &c they use them only to fignify that there are such effects and such causes, with a frequent confession of their ignorance of the true springs of them; they do not pretend to make these words stand for the real causes of things, as though they thereby affigned the true philosophical solution of these difficulties; for, in this fense, they will still be words without ideas, whether in the mouth of an old philosopher or a new one.

here is sufficient evidence for the reality and certainty of the existence of their objects; though there is some consustion in our clearest conceptions of them, and our ideas of them, though imperfect, are yet sufficient to converse about them, so far as we have need, and to determine so much as is necessary for our own faith and practice.

t ].

eby

the

the

10

the

lin

urtick

ves

or

uch

m-

not

Ws

ig-

ere

dif-

ive

ngs

uty

the

ift,

xc.

for

ere

ofo-

ms,

dies

ne-

hat na-

of

atef-

no-

ney

es;

in

c. VI. §. 3.

Direct. II. Do not suppose that the natures or essences of things always differ from one another, as much as their names do. There are various purposes in human ife, for which we put very different names on the ame thing, or on things whose natures are near a-kin; and thereby oftentimes, by making a new nominal species, we are ready to deceive ourselves with the idea of another real species of beings: and those whose understandings are led away by the mere sound of words, ancy the nature of those things to be very different whose names are so, and judge of them accordingly.

I may borrow a remarkable instance for my purpose lmost out of every garden, which contains a variety of plants in it. Most or all plants agree in this, that they have a root, a stalk, leaves, buds, blossoms, and seeds: but the gardener ranges them under very different names, as though they were really different kinds of peings, merely because of the different use and service to which they are applied by men: as for instance hose plants whose roots are eaten shall appropriate the name of roots to themselves; such are carrots, turnips, radishes, &c. If the leaves are of chief use to us, then we call them herbs; as fage, , mint, thyme, if the leaves are eaten raw, they are termed fallad; as lettuce, purstain: if boiled, they become pot-herbs; as spinage, foleworts; and some of those same plants which are pot-herbs in one family, are saltad in another. If the buds are made our food, they are called heads or tops; o cabbage-heads, heads of asparagus and artichokes. If the bloffom be of most importance, we call it a fower; fuch are daifies, tulips, and carnations, which

83

But er

I

an

ur

tan

ro

ba

lea

I

Men

reca

nas nist

ffa

Ifh

ers

ers difc

he

grou

brin wife

the

foul

udg

by t

mon

vege

Coul

earl

being

if w

wor

with

wor

ples

are the mere bloffoms of those plants. If the bufks of feeds are eaten, they are called the fruits of the ground as peafe, beans, strawberries, &c. If any part of the plant be of known and common use to us in medicine we call it a physical berb, as carduus, scurvy-grafi but if we count no part ufeful, we call it a weed, and throw it out of the garden; and yet perhaps our new neighbour knows fome valuable property and use of its he plants it in his garden, and gives it the title of a herb, or a flower .- You see here how small is the real distinction of these several plant, considered in their general nature as the leffer vegetables : yet what ven different ideas we vulgarly form concerning them and make different species of them, chiefly because of the different names given them,

Now, when things are fet in this clear light, it appears how ridiculous it would be for two persons to contend, whether dandelion be an herb or a weed! whether it be a pot-berb or fallad; when by the custom or fancy of different families, this one plant obtains all these names, according to the several uses of it, and

the value that is put upon it.

Note here, that I find no manner of fault with the variety of names which are given to several plants, according to the various uses we make of them. But I would not have our judgments imposed upon hereby to think that these mere nominal species viz. herbs, fallad, and weeds, become three really different species of beings on this account, that they have different name and uses. But I proceed to other instances.

It has been the custom of mankind, when they have been angry with any thing, to add a new ill name toil that they may convey thereby a hateful idea of it, tho the nature of the thing still abides the same. So the Papists call the Protestants, Hereticks: a profane person calls a man of piety, a Precision: and in the times d the civil war in the last century, the royalists called the parliamentarians Fanaticks, Roud-heads and Sectarias and they, in requital, called the roylifts Malignanti. irt I

ks or

und.

f the

icine

rasi

and

next

fit:

f an

their

very

nem.

fthe

ap-

ed:

tom

all

and

the

ac-

t I

by.

fal-

of

nes

246

it,

the

on

d

he

1

ts.

But the partizans on each side were really neither beter nor worse for these names.

It has also been a frequent practice, on the other and, to put new favorable names upon ill ideas, on surpose to take off the odium of them. But notwithtending all these flattering names and titles, a man of profuse generosity is but a spendthrist; a natural son is bastard still; a gallant is an adulterer, and a lady of sleasure is a whore.

Direct. III. Take heed of believing the nature and spece of two or more things to be certainly the same, because they may have the same name given them. This has been an unhappy and fatal occasion of a thousand mistakes in the natural, in the civil, and in the religious offairs of life, both amongst the vulgar and the learned. I shall give two or three instances chiefly in the matters of natural philosophy, having hinted several dangers of this kind relating to theology in the foregoing

discourse concerning equivocal words.

Our elder philosophers have generally made use of the word Sour to fignify that principle whereby a plant grows, and they called it the vegetative foul: The principle of the animal motion of a brute has been likewife called a foul, and we have been taught to name it the sensitive soul: they have also given the name of foul to that superior principle in man, whereby he thinks, udges, reasons, &c. And though they distinguished this by the honourable title of the rational foul, yet in common discourse and writing we leave out the words vegetative, sensitive, and rational; and make the word foul serve for all these principles: thence we are led early in this imagination, that there is a fort of spiritual being in plants and in brutes, like that of men. Whereas if we did but abstract and separate these things from words, and compare the cause of growth in a plant, with the cause of reasoning in a man, (without the word foul) we should never think that these two principles were at all like one another; nor should we per-

io

no

au

1

bea

ho

ew

vro

ve vill

I

cie

her

mea

pea hey

bey

an i

all t

chur

affer

the o

wide

A faith

as z

agre

inte

by t

our

the

haps fo easily and peremptorily conclude, that bruth need an intelligent mind to perform their animal actions.

Another instance may be the word LIFE, which be ing attributed to plants, to brutes, and to men, and in each of them ascribed to the soul, has very easily be trayed us from our infancy into this mistake, that the spirit or mind, or thinking principle in man, is the spring of vegetative and animal life to his body: whereas it evident, that if the spirit, or thinking principle of man, gave life to his animal nature, the way to save men from dying would not be to use medicines, but to

perfuade the spirit to abide in the body.

I might derive athird instance from the word HEAT which is used to fignify the fenfation we have when w are near the fire, as well as the cause of that sensation which is in the fire itself; and thence we conclud from our infancy, that there is a fort of heat in the fin resembling our own sensation, or the heat which we fell whereas in the fire there is nothing but little particle of matter of fuch particular shapes, sizes, situations and motions as are fitted to impress such motions of our flesh or nerves as excite the sense of heat. Now if this cause of our sensation in the fire had been always called by a distinct name: perhaps we had not been if tooted in this mistake, that the fire is hot with the same fort of heat that we feel. This will appear with more evidence, when we confider, that we are secure from the same mistake when there have been two different names allotted to our fensation, and to the cause of it: as, we do not fay, Pain is in the fire that burns us, or in the knife that cuts and wounds us; for we call it burning in the fire, cutting in the knife, and pain only when it is in ourfelves.

Numerous instances of this kind might be derived from the words fweet, four, loud, shritt, and almost all the fensible qualities, whose real natures we mistake from our infancy, and we are ready to suppose them art [

brute

al ac.

h beand in

y be-

it the

prin

sitis

man

me

ut to

EAT

)) W

ation

clude

e fin

feel!

icle

ions

S On

Tow.

ways

n fi

ame

nore

rom

rent it:

or lit

only

ved t all

ake

em to o be the same in us, and in the bodies that cause them; artly because the words which signify our own sensations are applied also to signify those unknown shapes and motions of the little corpuscles, which excite and ause those sensations.

Direct. IV. In conversation, or reading, be diligent of find out the true sense, or distinct idea, which the beaker or writer affixes to his words; and especially to hose words which are the chief subject of his discourse.

As far as possible take heed, lest you put more or ewer ideas into one word, than the person did when he wrote or spoke; and endeavour that your ideas of very word may be the same as his were: then you

will judge better of what he speaks or writes.

It is for want of this that men quarrel in the dark; and that there are so many contentions in the several ciences, and especially in divinity. Multitudes of hem arise from a mistake of the true sense or complete meaning, in which words are used by the writer or speaker; and hereby sometimes they seem to agree, when they really differ in their sentiments; and sometimes they seem to differ when they really agree. Let me give an instance of both.

When one man by the word church shall understand all that believe in Christ; and another by the word shurch means only the church of Rome; they may both affent to this proposition, There is no salvation out of the church, and yet their inward sentiments may be

widely different.

Again, if one writer shall affirm, that virtue added to faith is sufficient to make a Christian, and another shall as zealously deny this proposition, they seem to differ widely in words, and yet perhaps they may both really agree in sentiment; if by the word virtue, the affirmer intends our whole duty to God and man; and the denier by the word virtue, means only courage, or at most our duty towards our neighbour, without including in the idea of it the duty which we owe to God.

H 2

Many

Part I

hap el

ter ful

wo

bri

fou

cia

enc

cor

the

kn

**fen** 

you

No

had

tua

ou the

dif

by

rig

bif

figi

tho

eve use

mu

for

as

def

WC dai

inf

tha

yo

Many fuch forts of contentions as these are, if traced to their original, will be found to be mere logomachia or strifes and quarrels about names and words, and vain janglings, as the apostle calls them in his first

letter of advice to Timothy.

In order therefore to attain clear and distinct idea of what we read or hear, we must search the fenses words; we must consider what is their original and derivation in our own or foreign languages; whati their common fense amongst mankind, or in other and thors, especially such as wrote in the same century, in the same age, about the same time, and upon the same fubjects: we must consider in what sense the same au. thor uses any particular word or phrase, and that when he is discoursing on the same matter, and especially a bout the same parts or paragraphs of his writing: we must consider whether the word be used in a strict and limited, or in a large and general sense; whether in literal, in a figurative, or in a prophetic fense; whether it has any fecondary idea annexed to it besides the primary or chief fense. We must enquire farther, whati the scope and design of the writer; and what is the connexion of that fentence with those that go before and those which follow it. By these, and other methods, we are to fearch out the definition of names, i.e. the true fense and meaning in which any author or speaker uses any word, which may be the chief subject of discourse, or may carry any confiderable important in it.

Direct. V. When we communicate our notions to be thers, merely with a design to inform and improve that knowledge, let us, in the beginning of our discourse, tak care to adjust the definitions of names wherefoever than is need of it; that is, to determine plainly what w mean by the chief words which are the fubject of our discourse; and be sure always to keep the same idea whenfoever we use the same words, unless we give du notice of the change. This will have a very large and happy art 1

raced

chies

, and

fire

ideas

nfeof

and

nat is

r an.

y, in

fame

e au.

when

ly a.

: We

and

in :

ther

pri-

at is

the

re it.

me-

i. e.

r or

jed

ince

9 0beir

tak

ben

leas

due

ind

ppy

happy influence, in fecuring not only others but ourelves too from confusion and mistake; for even writers and speakers themselves, for want of due watchfulness, are ready to affix different ideas to their own words, in different parts of their discourses, and hereby bring perplexity into their own reasonings, and con-

found their hearers.

It is by an observation of this rule that mathematicians have so happily secured themselves, and the sciences, which they have professed, from wrangling and controversy; because whensoever in the progress of their treatises they have occasion to use a new and unknown word, they always define It, and tell in what fense they shall take it; and in many of their writings you find a heap of definitions at the very beginning. Now, if the writers of natural philosophy and morality had used the same accuracy and care, they had effectually feeluded a multitude of noify and fruitless debates out of their feveral provinces: nor had that facred theme of divinity been perplexed with fo many intricate disputes, nor the church of Christ been torn to pieces, by so many sets and factions, if the words grace, faith, righteousness, repentance, justification, worship, church, bishop, presbyter, &c. had been well defined, and their fignifications adjusted, as near as possible, by the use of those words in the New Testament; or, at least, if every writer had told us at first in what sense he would use those words.

Direct. VI. In your studies, as well as in the communication of your thoughts to others, merely for their information, avoid ambiguous and equivocal terms as much as possible. Do not use such words as have two or three definitions of the name belonging to them, i. e. fuch words as have two or three fenses, where there is any danger of mistake. Where your chief business is to inform the judgment, and to explain a matter, rather than to persuade or affect, be not fond of expressing yourselves in figurative language, when there are any H 3

fenf

acco

thof

the

deri

they

wor

moti

1

his

and

I

aft

n fe

tro

vori

mif

for

into

by a

thei

to a

WOI

new

bear

ven fire

For

ess

are

cess

bel

proper words that fignify the same idea in their literal sense. It is the ambiguity of names, as we have often said, that brings almost infinite confusion into our conceptions of things.

But where there is a necessity of using an ambiguous word, there let double care be used in defining that word, and declaring in what sense you take it. And be sure to suffer no ambiguous word ever to come into your

definitions.

Direct. VII. In communicating your notions, use every word as near as possible, in the same sense in which mankind commonly uses it; or which writers that have gone before you have usually affixed to it, upon condition that it is free from ambignity. Though names are in their original merely arbitrary, yet we should always keep to the established meaning of them, unless great necessity require the alteration; for, when any word has been used to signify an idea, that old idea will recur in the mind, when the word is heard, or read, rather than any new idea which we may fasten to it. And this is one reason why the received definition of names should be changed as little as possible.

But I add farther, that though a word entirely new, introduced into a language, may be affixed to what idea you please, yet an old word ought never to be fixed to an unaccustomed idea, without just and evident necessity, or without present or previous notice, lest we introduce thereby a license for all manner of pernicious equivocations and falshoods; as for instance, when an idle boy who has not seen his book since morning shall tell his master that he has learned his lesson, he can never excuse himself by saying, that by the word lesson he meant his breakfast, and by the word learn he meant eating; surely this would be construed a downright lie, and his fancied wit would hardly procure his

pardon.

In using an ambiguous word, which has been used in different senses, we may choose what we think the most proper sense, as I have done, p. 80. in naming the poles of the loadstone, north or south. And I.

ral

en

171-

ous

rd,

ire

ur

ve-

ich

202

in

ays

eat

ord

ner

nd

nes

W,

nat

X-

ent

est

er-

ce,

n-

071,

ord

he n-

his

ed

he

ng

nd

And when a word has been used in two or three senses, and has made a great inroad for error upon that account, it is of good service to drop one or two of those senses, and leave it only one remaining, and affix the other senses, or ideas to other words. So the modern philosophers, when they treat of the human soul, they call it the mind, or mens humana, and leave the word anima, or soul, to signify the principle of life and motion in mere animal beings.

The poet Juvenal has long ago given us a hint of this accuracy and distinction, when he says of brutes and men,

Indulsit mundi communis Conditor illis Tantum animas; nobis animum quòque. Sat. xvi. v. 134.

Exception. There is one case, wherein some of these aft rules concerning the definition of words, may be n some measure dispensed with; and that is, when frong and rooted prejudice hath established some favorite word or phrase, and long used it to express some mistaken notion, or to unite some inconsistent ideas; for then it is sometimes much easier to lead the world into truth by indulging their fondness for a phrase, and by affigning and applying new ideas and notions to heir favorite word; and this is much fafer also than to awaken all their passions by rejecting both their old words and phrases, and notions, and introducing all new at once: therefore we continue to fay, There is beat in the fire, there is coldness in ice, rather than invent new words to express the powers which are in fire or ice, to excite the fensations of heat or cold in us. For the same reason some words and phrases which are less proper, may be continued in theology, while people are led into clearer ideas with much more ease and suctels, than if any attempt were made to change all their beloved forms of speech.

In.

are

wi

co

507

que

ide

ber

the

and

bei

has

has

chu

to

chu

asp

fone

is e

and

effe

who

mif

ther ther ty a

In other cases, these logical directions should generally be observed, and different names affixed to different ideas.

Here I cannot but take occasion to remark, that it is a confiderable advantage to any language to have variety of new words introduced into it, that when in course of time new objects and new ideas arise, there may be new words and names affigned to them; and also where one single name has sustained two or three ideas in time past, these new words may remove the ambiguity by being affixed to fome of those ideas,-This practice would by degrees take away part of the uncertainty of language. And for this reason I cannot but congratulate our English tongue, that it has been abundantly enriched with the translation of words from all our neighbour nations, as well as from ancient languages, and these words have been, as it were, enfranchiled amongst us; for French, Latin, Greek, and German names will fignify English ideas, as well as words that are anciently and entirely English.

It may not be amiss to mention in this place, that as the determination of the particular sense in which any word is used, is called the definition of the name, so the enumeration of the various senses of an equivocal word is sometimes called the division or distinction of the name; and for this purpose good dictionaries are of excellent

use.

This distinction of the name or word is generally necessary in argumentation or dispute; when a fallacious argument is used, he that answers it distinguishes the several senses of some word or phrase in it, and shews in what sense it is true, and in what sense it is as evidently salse.

SECT.

t I,

ne-Fer-

at it

n in Dere

and

the

.

the

not

een

om

an-

en-

and

as

25

iny

ord

ne:

ent

1e-

ous the

ws vi-

r.

### SECT. IV.

## Of the Definition of Things.

S there is much confusion introduced into our ideas, by the means of those words to which they are affixed, fo the mingling our ideas with each other, without caution, is a farther occasion whereby they become confused. A court lady born and bred up amongst pomp and equipage, and the vain notions of birth and quality, constantly joins and mixes all these with the idea of herfelf, and the imagines thefe to be effential to ber nature, and, as it were, necessary to her being; thence she is tempted to look upon menial servants, and the lowest rank of mankind, as another species of beings quite distinct from herself. A plough-boy, that has never travelled beyond his own village, and has feen nothing but thatched houses and his parish church, is naturally led to imagine that thatch belongs to the very nature of a house, and that must be a church which is built of flone, and especially if it has a a spire upon it. A child whose uncle has been excessive fond, and his fehool-mafter very fevere, eafily believes, that fondness always belongs to uncles, and that severity is effential to masters or instructors. He has seen also foldiers with red coats, or ministers with long black gowns and therefore he persuades himself that these garbs are effential to the characters, and that he is not a minister who has not a long black gown, nor can he be a foldier who is not dreffed in red. It would be well if all fuch mistakes ended with childhood.

It might be also subjoined, that our complex ideas become confused, not only by uniting or blending together more simple or single ideas, than really belong to them, as in the instances just mentioned; but obscurity and confusion sometimes come upon our ideas also,

for

Ċ.

Spe

jui

the

and

or j

wh

like

the

the

fers

for

oth

nat

get

the

dee

as a

and

fine

the

tati

as a

a m

fron

Crip

not

repr

figu

repr

apri

pain

Nov

geth

fron

diffe

clud

for want of uniting a sufficient number of single ideas to make the complex one: so if I conceive of a leopard, only as a spoited beast, this does not distinguish it from a tyger or a lynx, nor from many dogs or borses, which are spotted too; and therefore a leopard must have some more ideas added to complete and distinguish it.

I grant that it is a large and free acquaintance with the world, a watchful observation and diligent search into the nature of things that must fully correct this kind of errors. The rules of logick are not sufficient to do it; but yet the rules of logick may instruct us by what means to distinguish one thing from another, and how to search and mark out as far as may be, the contents and limits of the nature of distinct being, and thus may give us great affishance towards the remedy of these mistakes.

As the definition of names frees us from that confusion which words introduce, so the definition of things will in some measure guard us against that consulion which mingled ideas have introduced: for, as a definition of the name explains what any word means, so a definition of the thing explains what is the nature of that thing.

In order to form a definition of any thing, we must

put forth these three acts of the mind.

First, Compare the thing to be defined with other things that are most like to itself, and see wherein its essence or nature agrees with them; and this is called the general nature or genus in a definition: So if you would define what wine is, first compare it with other things like itself, as Cyder, Perry, &c. and you will find it agrees essentially with them in this, that it is a sort of juice.

Secondly, Consider the most remarkable and primary attribute, property, or idea wherein this thing differs from those other things that are most like it; and that is its effential or specific difference: so Wine differs from Cyder and Perry, and all other juices, in that it is pressed from a grape. This may be called its special

I.

to

d,

ch

ve

.

th

ch

nd

to by

er, he

nd

dy

n.

igs

on 2i-

12

of

uft

its

ed ou

er

rill

3 2

a-

ng

t;

718

in

its

ial

special nature, which distinguishes it from other juices.

ther, or (which is all one) the genus and the difference, and these make up a definition. So the juice of a grape, or juice pressed from grapes, is the definition of wine.

So, if I would define what winter is, I consider first wherein it agrees with other things which are most like it, (viz.) Summer, Spring, Autumn, and I find they are all feasons of the year: therefore a feason of the year is the genus. Then I observe wherein it differs from these, and that is in the shortness of the days, for it is this which does primarily distinguish it from other seasons; therefore this may be called its special nature, or its difference. Then by joining these together I make a definition. Winter is that season of the year wherein the days are shortest. I consess indeed this is but a ruder definition of it; for to define it as an accurate astronomer, I must limit the days, hours and minutes.

After the same manner, if we would explain or define what the picture of a man is, we consider first the genus or general nature of it, which is a representation; and herein it agrees with many other things, as a statue, a shadow, a print, a verbal description of a man, &c. Then we consider wherein it differs from these, and we find it differs from a verbal description, in that it is a representation to the eye, and not to the ear: it differs from a statue, in that it is a representation upon a flat surface, and not in a solid figure: it differs from a shadow, in that it is an abiding representation, and not a fleeting one: it differs from aprint or draught, because it represents the colours by paint, as well as the shape of the object by delineation. Now, so many, or rather so few of these ideas put together, as are just sufficient to distinguish a picture from all other representations, make up its effential difference, or its special nature; and all these are included in its being painted on a plain surface. join

hor

SC

diff

vea

alw

day:

ft

R

all

icul

he f

ber 9

rence

R

lefine

ign rom

other out w

T

defi

fche

ion r

hing erni

other uice

join this to the genus, which is a representation; and thus you have the complete definition of the picture of a man, viz. it is the representation of a man in paint upon a surface, or a plane.

Here it must be observed, that when we speak of the genus and difference, as composing a definition, it must always be understood that the nearest genus, and the

specific difference are required.

The next general nature, or the nearest genus, must be used in a definition, because it includes all the rest; and if I would define wine, I must say wine is a juice, which is the nearest genus; and not say, wine is a significant, which is a remote general nature; or, wine is a substance, which is yet more remote, for juice includes both substance and liquid. Besides, neither of these two remote general natures would make any distinction between wine and a thousand other substances, or other liquid, a remote genus leaves the thing too much undistinguished.

The specific difference is that primary attribute which distinguished each species from one another, while they stand ranked under the same general nature or genus. Though wine differs from other liquids, in that it is the juice of a certain fruit, yet this is but a general or generick difference, for it does not distinguish wine from cyder or perry; the specific difference of wine therefore is its pressure from the grape; as cyder is pressed from apples, and perry from

pears.

In definitions also we must use the primary attribute that distinguishes the species or special nature, and not attempt to define wine by its particular tastes, or essects, or other properties, which are but secondary of consequential, when its pressure from the grape is the most obvious and primary distinction of it from all other juices. I confess, in some cases, it is not so easily known which is the primary idea that distinguishes one thing from another; and therefore some would as soon define winter by the coldness of the season, as by the shortness

1,

and

of a

pon

the

uft

the

uft :

li-

des

be-

her un-

ute

ier,

ure

, in

not ific

the

om

ute

not ef-

10

the

0-

fily

one

noc

shortness of the days; though the shortness of the days is doubtless the most just, primary, and philosophical difference betwixt that and the other seasons of the year, since winter days are always shortest, but not always the coldest: I add also, that the shortness of the days is one cause of the coldness, but the cold is no cause of their shortness.

#### SECT. V.

Rules of the Definition of the Thing.

THE special Rules of a good Definition are these:

Rule I. A definition must be universal, or, as some call it, adequate; that is, it must agree to all the particular species or individuals that are included under the same idea; so the juice of a grape agrees to all proper wines, whether red, white, French, Spanish, Florence, &c.

Rule II. It must be proper and peculiar to the thing defined, and agree to that alone: for it is the very design of a definition effectually to distinguish one thing from all others: so the juice of a grape agrees to no other substance, to no other liquid, to no other being, but wine.

These two rules being observed, will always render definition reciprocal with the thing defined, which is scholastick way of speaking, to signify that the definition may be used in any sentence in the place of the hing defined; or they may be mutually affirmed contening each other, or substituted in the room of each other. The juice of the grape is wine, or wine is the wice of the grape. And wheresoever the word wine is

the

(

th

fe

fr

kı

pa

ra

ru

mi

Ic

WO

of

it f

im

pla

be

COL

nit

of z

com

WO.

the

rith

are

is d

wel

lear

be j

the

mak

used, you may put the juice of the grape instead of it, except when you consider wine rather as a word than a thing, or when it is mentioned in such logical rules.

Rule III. A definition ought to be clear and plain; for the design of it is to lead us into the knowledge of

the thing defined.

Hence it will follow, that the words used in a definition ought not to be doubtful, and equivocal, and obscure, but as plain and easy as the language will anord: and indeed it is a general rule concerning the definition both of the names and things, that no word should be used in either of them, which has any darkness or difficulty in it, unless it has been before explained or defined.

Hence it will follow also, that there are many things which cannot well be defined, either as to the name or the thing, unless it be by synonimous words, or by a negation of the contrary idea, &c. For learned men know not how to make them more evident, or more intelligible than the ideas which every man has gained by the vulgar methods of teaching. Such are the ideas of extension, duration, thought, conscious s, and most of our timple ideas, and particularly sensible qualities, as white, blue, red, cold, heat, shrill, bitter,

four, &c.

We can say of duration, that it is a continuance in being, or a not ceasing to be; we can say of consciousness, that it is, as it were, a feeling within ourseives: we may say beat is that which is not cold; or jour is that which is like vinegar; or we may point to the clear sky, and say that it is blue. These are the vulgar methods of teaching the definition of names, or meaning of words. But there are some philosophers, whose attempts to define these things learnedly, have wrapt up their ideas in greater darkness, and exposed themselves to ridicule and contempt; as when they define heat, they say, it is qualitas congregans homogenea, & segregans beterogenea; is a quality gathering together things

1

of

-

ld or

or

27

or

n

re

d

10

nd

le

r,

-

S,

76

at

ar

g

ip es

t,

-

er

things of the same kind, and separating things of a different kind. So they define white, a colour arising from the prevalence of brightness: But every child knows hot and white better without these definitions.

There are many other definitions given by the Peripatetick philosophers, which are very faulty by reason of their obscurity; as motion is defined by them, the act of a being in power, so far forth as it is in power, Time is the measure or number of motion according to past, present, and suture. The soul is the act of an organical natural body, having life in power; and several others of the same stamp.

Rule IV. It is also commonly prescribed among the rules of definition, that it should be short, fo that it must have no tautology in it, nor any words superfluous. I confeis definitions ought to be exprelled in as few words as is confiftent with a clear and just explication of the nature of the thing defined, and a distinction of it from all other things beside: But it is of much more importance, and far better, that a definition should explain clearly the subject we treat of, though the words be many, than to leave obscurities in the sentence, by confining it within too narrow limits. So, in the definition which we have given of Logick, that is the art of using reason well, in the search after trutth, and the communication of it to others. It has indeed many words in it, but it could not well be shorter. Art is the genus wherein it agrees with rhetorick, poefy, arithmetick, wrestling, failing, building, &c. for all these are arts also: but the difference, or special nature of it is drawn from its object, reason; from the act, using it well, and from its two great ends, or deligns, viz. the earch of truth, and the communication of it, nor can itbe justly described and explained in fewer ideas.

V. If we add a fifth rule, it must be, that neither the thing defined, nor a mere synonymous name, should make any part of the definition, for this would be no explication.

t

e

6

t١

W

to

no m

Po

mi

bil

im

fau

ma

Cau bei

the

i j

explication of the nature of the thing; and a synony. mous word at best could only be a definition of the

# many other definitions gav ment of fourty; as mirror sector by them is

## and a laing in person Observations concerning the Definition of Things.

EFORE I part with this subject, I must propose feveral observations which relate to the definition

of things.

1. Observ. There is no need that in definitions we should be confined to one fingle attribute or property in order to express the difference of the thing defined, for fometimes the effential difference confifts in two or three ideas, or attributes. So, a grocer is a man wh buys and fells Sugar, plumbs, and Spices for gain, A clock is an engine with weights and wheels, that shows the hour of the day both by pointing and striking. And if I were to define a repeating clock, I must add another property, viz. that it also repeats the hour. So that the true and primary effential difference of some complex ideas, confifting in feveral diffinct properties, cannot be well expressed without conjunctive particles of fpeech.

2d. Olferv. There is no need that definitions should always be positive, for some things differ from others merely by a defect of what others have; as if a chair be defined a feat for a fingle person, with a back belonging to it; then a flool is a feat for a single perfor without a back; and a form is a feat for several person without a back: these are negative differences. Sa sin is a want of conformity to the law of God; blindnis is a want of fight; a vagabond is a person without home. Some ideas are negative, and their definition

ought to be fo too.

ad Observ. Some things may have two or more definitions, and each of them equally just and good; as a mile is the length of eight furlongs, or it is the third part of a league. Eternal is that which ever was and ever shall be; or, it is that which had no beginning and shall have no end. Man \* is usually defined a rational animal; but it may be much better to define him a spirit united to an animal of such a shape; or an animal of sucha peculiar shape united to a spirit, or a being composed of fuch an animal and a mind.

Ath Observ. Where the effences of things are evident and clearly distinct from each other, there we may be more exact and accurate in the definitions of them: but where their effences approach near to each other, the definition is more difficult. A bird may be defigned a feathered animal with wings, a ship may be designed a large hollow building made to paf over the fea with fails: But if you alk me to define a bat, which is between a bird and a beaft, or to define a barge and boy, which are between a boat and a ship, it is much harder to define them, or to adjust the bounds of their effence. This is very evident in all monstrous births, and irregular productions of noture, as well as in many works of nature, which partake so much of one species, and so. much of another, that we cannot tell under which species to rank them, or how to determine their specific difference.

The feveral species of beings are seldom precisely limited in the nature of things by any unalterable bounds. The effences of many things do not consist in indivisihili, or in one evident indivisible point, as some have imagined; but by various degrees they approach near-

pole ition

til

ony.

s We berty, ined, vo or

z who

A hews And

an-So fome rties,

ticles

hould others chair

k beperfor erfons So

ndnes out a itions

The common definition of man, viz. a rational animal, is very faulty. T. Because the animal is not rational, the rationality of man arises from the mind to which the animal is united. 2. Because if a spirit should be united to a borse, and make it a rational being, surely this would not be a man. It is evident therefore that the peculiar flope must enter into the definition of a man to fender it just and perfect; and for want of a full description thereof all our definitions are defestive.

e

6

W

T

no m

Po

di

mi T

bil

im

mai

Cau beir

the

it jı 100

explication of the nature of the thing; and a synony. mous word at best could only be a definition of the

# difference offeners; as exercise defined by reache

Tarre are many after definitions given by the P.

stell thouse with a tile bas to

## also a being in power, for far feets c Observations concerning the Definition of Things.

DEFORE I part with this subject, I must propose feveral observations which relate to the definition

of things.

1. Observ. There is no need that in definitions we should be confined to one single attribute or property, in order to express the difference of the thing defined for sometimes the effential difference consists in two or three ideas, or attributes. So, a grocer is a man who buys and fells Sugar, plumbs, and spices for gain, A clock is an engine with weights and wheels, that shew the hour of the day both by pointing and striking. And if I were to define a repeating clock, I must add another property, viz. that it also repeats the hour. So that the true and primary essential difference of some complex ideas, confisting in feveral distinct properties, cannot be well expressed without conjunctive particles of speech.

2d. Observ. There is no need that definitions should always be positive, for some things differ from others merely by a defect of what others have; as if a chair be defined a feat for a fingle person, with a back belonging to it; then a flool is a feat for a single perfor without a back; and a form is a feat for several person without a back: these are negative differences. So fin is a want of conformity to the law of God; blindail is a want of fight; a vagabond is a person without home. Some ideas are negative, and their definitions

ought to be fo too.

MODEONIA

3d Observ. Some things may have two or more definitions, and each of them equally just and good; as a mile is the length of eight furlongs, or it is the third part of a league. Eternal is that which ever was and ever shall be; or, it is that which had no beginning and shall bave no end. Man \* is usually defined a rational animal; but it may be much better to define him a spirit united to an animal of such a shape; or an animal of such a peculiar shape united to a spirit, or a being composed of such an animal and a mind.

4th Observ. Where the effences of things are evident and clearly distinct from each other, there we may be more exact and accurate in the definitions of them: but where their essences approach near to each other. the definition is more difficult. A bird may be defigned a feathered animal with wings, a ship may be defigned a large hollow building made to paf over the fea with fails: But if you alk me to define a bat, which is between a bird and a beaft, or to define a barge and hoy. which are between a boat and a ship, it is much harder to define them, or to adjust the bounds of their effence. This is very evident in all monstrous births, and irregular productions of noture, as well as in many works of nature, which partake so much of one species, and so. much of another, that we cannot tell under which species to rank them, or how to determine their specific difference.

The several species of beings are seldom precisely limited in the nature of things by any unalterable bounds. The essences of many things do not consist in indivisibility, or in one evident indivisible point, as some have imagined; but by various degrees they approach near-

503 (by Not) subtained bis 1

pole

t I

ny.

the

erty, ined, to or

hews And an-

So fome rties, ticles

hould thers chair

k beperson ersons So,

ndness out a

30

The common definition of man, viz. a rational animal, is very faulty. to Because the animal is not rational; the rationality of man arises from the mind to which the animal is united. 2. Because if a spirit should be united to a borse, and make it a rational being, surely this would not be a man. It is evident therefore that the petuliar shape must enter into the definition of a man to render it just and perfect; and for want of a full description thereof all our desipitions are described.

n

ri

Se

th

C

be

O

01

ti

of

m

W

She

fo

CO

ob

no di

to m

th

th

er to, or differ more from others that are of a kindred nature So, as I have hinted before, in the very middle of each of the arches of a Rainbow the colours of green, yellow, and red, are sufficiently distinguished; but near the borders of the several arches they run into one another, so that you hardly know how to limit the colours, nor whether to call it red or yellow, green or blue.

and not-being, can never be defined, because there is no genus superior to them; so neither can singular ideas or individuals be well defined, because either they have no essential differences from other individuals, or their differences are not known; and therefore individuals are only to be described by their particular circumstances: So king George is distinguished from all other men and other kings, by describing him as the first king of Great Britain, of the house of Brunswick; and Westminsterball is described by its situation and its use, &c.

That individual bodies can hardly have any effential difference, at least within the reach of our knowledge, may be made thus to appear; Methusclah, when he was nine hundred and fixty years old, and perhaps worn out with age and weakness, was the same person as when he was in his full vigour of manhood, or when he was an infant, newly born; but how far was his body the fame; who can tell whether there was any fibre of his flesh or his bones, that continued the same throughout his whole life? or who can determine which were those fibres? The ship in which Sir Francis Drake failed round the world might be new built, and refitted so often, that few of the same timbers remained; and who can say whether it must be called the fame ship or no? and what is its essential difference; How shall we define Sir Francis Drake's ship, or make a definition for Methufelah?

What is the principle of individuation? or, what is it

that

I.

red

iid.

s of

ed;

nto

the

10 5

eing

s no

deas

ave

heir uals

an-

men

g of

ule,

rtial

ige,

he

rorn

25

hen

bo-

fi-

ame

aine

meis

and

ain-

the

ce;

ake

101, SI

that

that makes any one thing the same as it was fometime hefore? This is too large and laborious an inquiry to dwell upon it in this place : Yet I cannot forbear to mention this hint, viz. fince our own bodies must rife at the last day for us to receive rewards or punishments in them, there may be perhaps some original fibres of each human body, some stamina vita, or primeval feed of life, which may remain unchanged through all the stages of life, death, and the grave; these may become the springs and principles of a resurrection, and fufficient to denominate it the same body. But if there he any fuch constant and vital atoms, which distinguish every human body, they are known to God

6th Observ. Where we cannot find out the effence or essential difference of any species or kind of beings. that we would define, we must content ourselves with a collection of fuch chief parts or properties of it, as may best explain it so far as it is known, and best diftinguish it from other things: So a marigold is a flower which hath many long yellow leaves, round a little knot of feeds in the midft, with fuch a peculiar stalk, &c. So. if we would define filver, we say it is a white and hard metal, next in weight to gold: If we would define an elder tree, we might fay it is one among the leffer trees, whose younger branches are soft and full of pith, whose leaves are jagged, or indented, and of such a particular shape, and it bears large clusters of small black berries; so we must define water, earth, stone, a lion, an eagle, a serpent, and the greatest part of natural beings, by a collection of those properties, which, according to our observation, distinguish them from all other things. This is what Mr. Locke calls nominal effences, and nominal definitions. And indeed fince the effential differences of the various natural beings, or bodies round about us, arise from a peculiar shape, size, motion, and fituation of the small particles of which they are composed, and since we have no sufficient method to inform us what these are, we must be content. LIG.

21

na

th

th

tit

an

th

di

de

re

fu

fu

th

Va

be

no

ir

na

pi

Splin

de

m

n

ed with such a fort of definitions of the bodies the

compose.

Here note, that this fort of definition, which is made up of a mere collection of the most remarkable parts or properties, is called an imperfect definition, or a description; whereas the definition is called perfect, when it is composed of the essential difference, added

to the general nature or genus.

ways includes the definition of the name whereby it is called; for it informs us of the sense or meaning of that word, and shews us what idea that word is affixed to: but the de nition of the name does by no means include a perfect definition of the thing; for, as we have said before, a mere synonymous word, a negation of the contrary, or the mention of any one or two distinguishing properties of the thing may be a sufficient definition of the name. Yet in those cases, where the essential difference, or essence of a thing is unknown, there a definition of the name, by the chief properties and a description of the thing, are much the same.

And here I think it necessary to take notice of one general sentiment, that seems to run through that excellent performance, Mr. Locke's essay of human understanding; and that is, "that the essences of things are utterly unknown to us, and therefore all our pretences to distinguish the essences of things can reach no farther than mere nominal essences, or a collection of such properties as we know; to some of which we assix particular names, and others we bundle up, several together, under one name: and that all our attempts to rank beings in different kinds of species can reach no farther than to make mere nominal secies; and therefore our definitions of things are but mere nominal description

ons, or definitions of the name."

Now, that we may do justice to this great author, we ought to consider that he consines this sort of discourse only to the essence of simple ideas, and to the essence of substances, as appears evident in the fourth and

t L

they

rade

arts

)r 2

ect.

ded

al-

t is

gof

fix.

ans

lave

n of

dif

ent

the

wn,

ies,

one

ex-

ler-

are

her

10-

ar-

to-

to.

no

ore

ti-

07,

lif-

the

rth

nd

and fixth chapters of his third book; for he allows the names of mixt modes always to fignify the real effences of their species, chap. v.; and he acknowledges artificial things to have real distinct species, and that in the distinction of their essences, there is generally less confusion and uncertainty than in natural, chap. vi. sect. 43, 41. though it must be confessed, that he scarce makes any distinstion between the definition of the name, and the definition of the thing, as ch. iv. and sometimes the current of his discourse decries the knowledge of essences in such general terms, as may justly give occasion to mistake.

It must be granted, that the essence of most of our simple ides, and the greatest part of particular natural substances, are much unknown to us; and therefore the essential difference of sensible qualities, and of the various kinds of bodies, as I have said before, lie beyond the reach of our understandings: We know not what makes the primary real inward distinctions between red, green, sweet, sour, &c. between wood, iron, oil, stone, sire, water, stess, clay, in their general natures; nor do we know what are the inward and prime distinctions between all the particular kinds or species in the vegetable, animal, mineral, metallick, or liquid, world of things. See Philosophy. Essays, Ess. xi. sect. 1.

But still there is a very large field for the knowledge of the essences of things, and for the use of persect desinitions amongst our complex ideas of the modal appearances and changes of nature, the works of art, the matters of science, and all the affairs of the civil, the moral, and the religious life: and indeed it is of much more importance to all mankind to have a better acquaintance with the works of art, for their own livelihood and daily use, with the affairs of morality for their behaviour in this world, and with the matters of religion, that they may be prepared for the world to come, than to be able to give a persect definition of the works of nature.

V

nov

heir

ell,

T

gs i

ties

ds,

thi

rio

Af

nd p

eat

thi

d v

ljuft

tha

mpt

low

qua

ect

on

feri

ille

ar c

d r

All

re

aw

y b

If the particular effences of natural bodies are the known to us, we may yet be good philosophers, good artists, good neighbours, good subjects, and good christians, without that knowledge, and we have just reason to be content.

Now, that the effences of some of the modal appear.

ances and changes in nature, as well as things of an,
finence, and morality, are sufficiently known to us to
make perfect definitions of them, will appear by the

specimen of a few definitions of these things.

Motion is a change of place. Swiftness is the pal. fing over a long space in a short time. A natural da is the time of one alternate revolution of light and darkness, or it is the duration of twenty-four hours. An ecliffe of the fun is a defect in the fun's transmit fion of light to us by the moon interpoling. Snow is congealed vapour. Hail\* is congealed rain. An Island is a piece of land rifing above the furrounding water. An bill\* is an elevated part of the earth, and a grove is a piece of ground thick fet with trees. An house is a building made to dwell in. A cottage is a mean house in the country. A supper is that meal which we make in the evening. A triangle is a figure composed of three fides. A gallon is a measure containing eight pints. A porter is a man who carries burdens for hire A king is the chief ruler in a kingdom. Veracity is the conformity of our words to our thoughts. ness is an excessive love of money, or other possessions. Killing is the taking away the life of an animal.-Murder is the unlawful killing of a man. is the art of speaking in a manner fit to persuade. Natural philosophy is the knowledge of the properties of bodies and the various effects of them; or, it is the knowledge

Note, Island, bill, grove, are not defigned here in their more remote and substantial natures, (if I may so express it) or as the matter of them is earth; for, in this sense we know and their effence, but only as considered in their modal appearances, whereby one part of earth is distinguished from another. The same may be said of snow, bail, &c.

nowledge of the various appearances in nature, and peir causes; and Logick is the art of using our reason

ell, &c.

un-

ood

ood

just

ar.

art,

s to

the

pas-

day

and

urs.

nif-

\* is

na\*

ter.

ve\*

le is

oule

ake

of ght ire.

the ouf-

ick

Va-

of

the

ge,

ore

nat-

nct,

d of

Thus you see the essential differences of various beigs may be known, and are borrowed from their quaties and proferties, their causes, effects, objects, acjunct,
ids, &c. and indeed as infinitely various as the essences
sthings are, their definitions must needs have very
arious forms.

After all it must be confessed, that many logicians ad philosophers, in the former ages, have made too reat a bustle about the exactness of their definitions things, and entered into long fruitless controversies ad very ridiculous debates in the several sciences about justing logical formalities of every definition; where that fort of wrangling is now grown very justly compuble, since it is agreed, that true learning and the nowledge of things depends much more upon a large quaintance with their various properties, causes, sects, subject, object, ends, and designs, than it does on the formal and scholastick niceties of genus and ference.

#### SECT. VII.

# Of a complete Conception of Things.

TAVING dwelt so long upon the first rule to direct our conceptions, and given an account of definition both of names and things, in order to gain ar and distinct ideas, we make haste now to the sed rule to guide our conceptions, and that is conceive things completely in all their parts.

All parts have a reference to some whole: now, re is an old distinction which logical writers make whole and its parts into sour several kinds, and it

y be proper just to mention them here.

I. There

ing

the

co

mo

lea

pie

the

cal

pa

W

de

fro

ead

pro

fci

wh

wh

con

and

tri

boa

vif

div

thi

of a thing is faid to consist of two parts, the genus, and the difference, i. e. the general and the special nature, which being joined together make up a definition. This has been the subject of the foregoing sections.

2. There is a mathematical whole, which is better called integral, when the several parts, which go to make up the whole are really distinct from one another, and each of them may subsist apart. So the head, the limbs, and the trunk, are the integral parts of an animal body; so units are the integral parts of any large number; so these discourses which I have written concerning perception, judgment, reasoning, and disposition, are the sour integral parts of togick. This sort of parts goes to make up the completeness of any subject; and this is the chief and most direct matter of our discourse in this section.

3. There is a physical, or essential whole, which is usually made to signify and include only the two essential parts of man, body and soul: but I think the sense of it may be better altered, or at least enlarged, and so include all the essential modes, attributes, or properties which are contained in the comprehension of any idea. This shall be the subject of discourse under the third rule to direct our conceptions.

4. There is a logical whole, which is also called an universal; and the parts of it are all the particular ideas to which the universal nature extends. So a genus is a whole in respect of the several species which are its parts. So the species is a whole, and all the individual are the parts of it. This shall be treated of in

the fourth rule to guide our conceptions.

At present we consider an idea as an integral wools, and our second rule directs us to contemplate it in all its parts: but this can only refer to complex ideas, for simple ideas have no parts.

legation (all to mendon them here,

has a both beyond the our start in the sect.

1.

nce

nus, naion,

to to ner,

the

mal

ım-

rn-

are

arts

and

irfe

is

en-

nfe

and

ro-

iny

the

an

lar

geare

01-

in

le,

all

as,

Г.

#### SECT. VIII.

Of Division, and the Rules of it.

CINCE our minds are narrow in their capacity, and cannot furvey the feveral parts of any complex being with one fingle view, as God fees all things at once; therefore we must, as it were, take it to pieces, and consider of the parts separately, that we may have a more complete conception of the whole. So, if I would learn the nature of a watch, the workman takes it to pieces, and shews me the spring, the wheels, the axles, the pinions, the ballance, the dial-plate, the pointer, the case, &c. and describes each of these things to me apart, together with their figures and their uses. If I would know what an animal is, the anatomist considers the head, the trunk, the limbs, the bowels apart from each other, and gives me distinct lectures upon each of them. So a kingdom is divided into its feveral provinces; a book into its feveral chapters; and any science is divided according to the several subjects of which it treats.

This is what we properly call the division of an idea which is an explication of the whole by its several parts, that go to compose any whole idea, and to render it complete. And I think when man is divided into body and soul, it properly comes under this part of the doctrine of integral division, as well as when the mere body is divided into head, trunk, and limbs: This division is sometimes called partition.

When any of the parts of any idea are yet farther divided, in order to a clear explication of the whole, this is called a fubdivision; as when a year is divided into months, each month into days, and each day into hours,

ies T

own

3.

ppoli

vou

imbs

he h

Y

ects

cien

he f lude

his he f

din

eom

ids :

foli

lon

netr

vide

For,

ollo

ed o

of t

4

nece

mon

min ding phy

its g

div

com

and

and

hours, which may also be farther fubdivided into minute

and feconds.

It is necessary in order to the full explication of any being, to confider each part, and the properties of it distinct by itself, as well as in its relation to the whole: for there are many properties that belong to the feveral parts of a being which cannot properly be ascribed to the whole, though these properties may fit each part for its proper station, and as it stands in that relation to the whole complex being; as in a house, the doors are moveable, the rooms square, the cielings white, the windows transparent, yet the house is neither moveable nor square, nor white, nor transparent.

The special Rules of a good Division are these.

I. Rule. Each part fingly taken must contain less than the whole; but all the parts taken collectively (or together) must contain neither more nor less than the whole Therefore, if in discoursing of a tree you divide it into the trunk and leaves, it is an imperfect division, because the root and the branches are needful to make up the So logick would be ill divided into apprehension, judgment, and reasoning; for method is a considerable part of the art which teaches us to use our reafon right, and should by no means be omitted.

Upon this account, in every division wherein we design a perfect exactness, it is necessary to examine the whole idea with diligence, left we omit any part of it through want of care; though in some cases it is not possible, and in others it is not necessary that we should

descend to the minutest parts.

2. Rule. In all divisions we should first consider the larger and more immediate parts of the subject, and not divide it at once into the more minute and remote parts. It would by no means be proper to divide a kingdom first into streets, and lanes, and fields, but it must be first divided into provinces or counties; then these counties

ies may be divided into towns, villages, fields, &c. and owns into streets and lanes.

3. Rule. The several parts of a division ought to be prosite, i. e. one part ought not to contain another. It would be a ridiculous division of an animal into head, imbs, body, and brain, for the brains are contained in the head.

Yet here it must be noted, that sometimes the subects of any treatife, or the objects of any particular tience, may be properly and necessarily so divided, that he second may include the first, and the third may inlude the first and second, without offending against his rule, because in the second, or following parts of he science or discourse, these objects are not considerd in the same manner as in the first; as for instance, cometry divides its objects into lines, surfaces, and soids: Now, though a line be contained in a furface, or folid, yet it is not considered in a surface separate and lone, or as a mere line, as it is in the first part of geonetry, which treats of lines. So Logick is rightly divided into conception, judgment, reasoning, and method. for, though ideas or conceptions, are contained in the following parts of logick, yet they are not there treated of as separate ideas, which are the proper subject of the first part.

4. Rule. Let not fubdivisions be too numerons without necessity: For it is better many times to distinguish more parts at once, if the subject will bear it, than to mince the discourse by excessive dividing and subdividing. It is preserable therefore in a treatise of geography to say, that in a city we will consider its walls, its gates, its buildings, its streets, and lanes, than to divide it formally first into the encompassing and the encompassed parts: the encompassing parts are the walls and gates; the encompassed part includes the ways and the buildings: the ways are the streets and the K 2

nutes

rt I,

any of it, nole:

veral ed to part

ation doors the

able,

tban togehole.

into ause the

henonfirea-

we

not ould

the not

rts. dom be

1171-

ties

be i

moi

nto

wou

unn

halv

nce

whe

inci

erto

ve k

God

ies

dn

rt o

er c

f di

he n

efigi

um

A

dge

e b

an

alit

ith

lanes; buildings consist of the foundations and the

Superstructure, &c.

Too great a number of subdivisions has been affected by some persons in sermons, treatises, instructions, &c. under pretence of greater accuracy; but this sort of subtleties have often given great confusion to the understanding, and sometimes more difficult to the memory. In these cases it is only a good judgment can determine what subdivisions are needful.

5. Rule. Divide every subject according to the special design you have in view. One and the same idea or Subject may be divided in very different manners accord. ing to the different purposes we have in discourling of it. So, if a printer were to confider the feveral parts of a book, he must divide it into sheets, the sheets into pages, the pages into lines, and the lines into letters. But a Grammarian divides a book into periods, sentences, and words, or parts of speech; as noun, pronoun, A Logician considers a book as divided into verbs, &c. shapters, folionis, arguments, propositions, ideas; and with the help of ontology, he divides the propositions into subject, object, property, relation, action, passion, cause, efficel, &c. But it would be very ridiculous for a logician to divide a book into sheets, pages, and lines; or for a printer, to divide it into nouns and pronount or into propositions, ideas, properties, or causes.

6. Rule. In all your divisions observe, with greatest exactness, the nature of things. And here I am constrained to make a subdivision of this rule into two

very necessary particulars.

(1.) Let the parts of your division be such as an properly distinguished in nature. Do not divide as funder those parts of the idea which are intimately united in nature, nor unite those things into one part which nature has evidently disjoined; this would be very improper in treating of an animal body to divide it into the superior and inserior halves; for it would

t I.

the

Hed

&c.

of

un-

me-

can

cial

10

ord-

g of

arts

into

ers.

ten-

oun,

into

and

ions

Fion,

for

nes;

uns

etest.

two

are

2-

tely one ould

di-

bluc

be

be hard to fay how much belongs by nature to the inferior half, and how much to the superior. Much more improper would it be still to divide the animal into the right-hand parts and left-hand parts, which would bring greater consusion. This would be as unnatural as a man who would cleave a hasel-nut in salves through the husk, the shell, and the kernel, at once, and say a nut is divided into these two parts; whereas nature leads plainly to the threefold disinction of husk, shell, and kernel.

(2.) Do not affect duplicities, nor triplicities, nor any ertain number of parts in your division of things; for we know of no such certain number of parts which had the creator has observed in forming all the varieties of his creatures, nor is there any uniform determinate number of parts in the various subjects of human art or science: yet some persons have disturbed the order of nature, and abused their readers by an affection of dichotomies, trichotomies, sevens, twelves, &c. Let the nature of the subject, considered together with the essen which you have in view, always determine the sumber of parts into which you divide it.

After all, it must be confessed, that an intimate knowdge of things, and judicious observation will affist in
e business of division, as well as of definition, better
an too nice and curious an attention to the mere foralities of logical writers, without a real acquaintance

ith things.

### SECT. IX.

facomprehensive Conception of Things, and of Abstraction,

Us to canceive of things comprehensively. As we K. 3

to

ma

ani

en

the

mu

nei

Ifi of

and

the

wa

ma

wh lon.

wh wh

wh

the

wh

do

ny com

is e

cal

tick

tur the

ule

ed

ma

wr

wh

div

har

must survey an object on all its parts to obtain a com. plete idea of it, so we must consider it in all its modes, attributes, properties, and relations, in order to obtain

a comprehensive conception of it.

The comprehension of an idea, as it was explained under the doctrine of universals, includes only the essential modes or attributes of that idea; but in this place the word is taken in a larger sense, and implies also the various occasional properties, accidental modes and relations.

The necessity of this rule is founded upon the same reasons as the former, viz. That our minds are nar. row and scanty in their capacities, and as they are not able to confider all the parts of a complex idea, at once, so neither can they at once contemplate all the different attributes and circumstances of it: we must therefore confider things fucceffively and gradually in the various appearances and circumstances. As our natural eye cannot at once behold the fix fides of a dye or cube, nor take cognizance of all the points that are marked on them, and therefore we turn up the fides fuccessively, and thus furvey and number the points that are marked

on each fide, that we may know the whole.

In order to a comprehensive view of an idea we must first consider, whether the object of it has an existence as well as an effence; whether it be a substance, or a mode; if it be a substance, then we must enquire what are the effential modes of it, which are necessary to its nature, and what are those properties or accidents of it, which belong to it occasionally, or as it is placed in some particular circumstances. We must view it in its internal and absolute modes, and observe it in those various external relations in which it stands to other beings; we must consider it in its powers and capacities either to do or fuffer. We must trace it up to its various causes, whether supreme or subordinate. We must descend to the variety of its effects, and take notice of its feveral ends and designs which are to be attained by it. We must conceive of it as it is either an

abjett

m- :

les,

ain

ed:

he

2ic

es

les

ne

r.

ot

16

nt

re

15

ve

or'

n

٧.

d

it

S

)

object or a fubject; what are the things that are a-kin to it, and what are the opposites or contraries of it; for many things are to be known both by their contrary

and their kindred ideas.

If the thing we discourse of be a mere mode, we must enquire whether it belongs to spirits or bodies; whether it be a physical or moral mode: if moral, then we must consider its relation to God, to our selves, to our neighbours; its reference to this life, or the life to come. If it be a virtue, we must seek what are the tendencies of it, and what are the false virtues that counterfeit it: and what are the real vices, that oppose it; what are the evils which attend the neglect of it, what are the rewards of the practice of it both here and hereafter.

If the subject be historical, or a matter of fact, we may then enquire whether the action was done at all; whether it was done in fuch a manner, or by fuch perfons as is reported; at what time it was done; in what place; by what motive, and for what design; what is the evidence of the fact; who are the witneffes; what is their character and credibility; what figns there are of such a fact; what concurrent testimonies which may either support the truth of it, or render it

doubtful.

In order to make due enquiries into all these, and many other particulars, which go towards the complete and comprehensive idea of any being, the science of ontology is exceeding necessary. This is what was wont to be called the first part of the metaphysicks in the peripatetick schools. It treats of being in its most general nature, and of all its affections, and relations. I confess the old popish schoolmen have mingled a number of useless subtleties with this science; they have exhausted their own spirits, and the spirits of their readers in many laborious and intricate trifles, and fome of their writings have been fruitful of names without ideas. which hath done much injury to the facred study of divinity. Upon this account many of the moderns have most unjustly abandoned the whole science at once.

Part I.

and

gati

rate

25 1

its d

of a

of 1

mai

att

tict wit

Are

nel

an of

to

ce

OL

ta

W

W

ra

and thrown abundance of contempt and railery upon the very name of metaphysicks: but this contempt and censure is very unreasonable; for this science separated from some Aristotelian sooleries and scholastick subtleties, is so necessary to a distinct conception, solid judgment, and just reasoning on many subjects, that sometimes it is introduced as a part of Logick, and not without reason. And those, who utterly despise and ridicule it, either betray their own ignorance, or will be supposed to make their wit and banter a resuge and excuse for their own laziness. Yet thus much I would add, that the late writers of ontology are generally the best on this account, because they have lest out much of the ancient Fargon. See the brief scheme of ontology in the philosical essays, by I.W.

Herelet it be noted, that it is neither useful, necessary or possible to run through all the modes, cicumstances, and relations of every subject we take in hand: but in entology we enumerate a great variety of them, that so a judicious mind may choose what are those circumstances, relations, and properties of any subject, which are most necessary to the present design of him that speaks or writes, either to explain, to illustrate, or to

prove the point.

As we arrive at the complete knowledge of an idea in all its parts, by that act of the mind which is called division, so we come to a comprehensive conception of a thing in its several properties and relations, by that act of the mind which is called abstraction, i. e. we consider each single relation or property of the subject alone, and thus we do, as it were, withdraw and separate it in our minds, both from the subject itself, as well as from other properties and relations, in order to make a fuller observation of it.

This act of abstraction is said to be twofold, either

precifive or negative.

Precisive abstraction is when we consider those things apart which cannot really exist apart; as when we consider a mode, without considering its substance and

I.

on

nd

ted

e-

g-

e-

h-

le

1

ſe.

d,

f

f

n

and subject, or one essential mode without another. Negative abstraction is when we consider one thing separate from another, which may also exist without it; as when we conceive of a subject without conceiving of its accidental mode or relations; or when we conceive of one accident without thinking of another. If I think of reading or writing, without the express idea of some man, this is precisive abstraction; or if I think of the attraction of iron, without the express idea of some particular magnetick body. But when I think of a needle, without an idea of its sharpness, this is negative abstraction: and it is the same when I think of its sharpness, without considering its length.

### SECT. X.

Of the extensive conception of things, and of distribution.

A S the completeness of an idea refers to the several parts that compose it, and the comprehension of an idea includes its various properties, so the extension of an idea denotes the various sorts or kinds of beings to which the same idea belongs: and if we would be fully acquainted with a subject we must observe.

This fourth rule to direct our conceptions, viz. conceive of things in all their extension, i. e. we must search out the various species or special natures which are contained under it as a genus, or general nature. If we would know the nature of an animal, perfectly, we must take cognizance of beasts, birds, sishes, and insects, as well as men; all which are container under the general nature and name of animal.

As an integral whole is distinguished into its several parts by division, so the word distribution is most properly used when we distinguish an universal whole into its several kinds or species: and perhaps it had

been

been better if this word had been always confined to this fignification, though it must be confessed, that we frequently speak of the *division* of an idea into its several kinds, as well as into several parts.

The rules of a good distribution are much the same with those which we have before applied to division, which may be just repeated again in the briefest man-

ner, in order to give examples to them.

I. Rule. Each part singly taken must contain less than the whole; but all the parts taken collectively or together, must contain neither more nor less than the whole; or, as Logicians sometimes express it, the parts of the division ought to exhaust the whole thing which is divided. So, medicine is justly distributed into prophylactick, or the art of preserving health; and therapeutick, or the art of restoring health: for there is no other fort of medicine besides these two. But men are not well distributed into tall or short, for there are some of a middle stature.

II. Rule. In all distributions we should first consider the larger and more immediate kinds or species, or ranks of being, and not divide a thing at once into the more minute and remote. A genus should not at once be divided into individuals, or even into the lowest species, if there be a species superior. Thus it would be very improper to divide animal into trout, lobster, eel, dog, bear, eagle, dove, worm, and buttersty; for these are inferior kinds: whereas animal ought first to be distributed into man, beast, bird, sisse, insect; and then beast should be distributed into dog, bear, &c. bird, into eagle, dove, &c. sisse, into trout, eel, lobster, &c.

It is irregular also to join any inferior species in the same rank or order with the superior; as if we would distinguish animals into birds, bears, and oysters, &c. it

would be a ridiculous distribution.

III. Rule. The several parts of distribution ought to be opposite; that is, one species or class of beings in the same rank of division ought not to contain or include another: so, men ought not to be divided into

pooric ric

int

the con as dri

opp

tha

with different than line or

use trib to into

fpe

but diff flin qua rig

tur any hav inte

and

into the rich, the poor, the learned, and the tall; for poor men may be both learned and tall, and so may the rich.

But it will be objected, are nor animated bodies rightly distributed into vegetative and animal; or (as they are usually called) fensitive? Now, the fensitive contains the vegetative nature in it, for animals grow as well as plants. I answer, that in this and all such didributions, the word vegetative signifies merely vegetative; and in this sense vegetative will be sufficiently opposite to animal, that it cannot be said of an animal that it contains mere vegetation in the idea of it.

IV. Rule. Let not subdivisions be too numerous without necessity; therefore I think quantity is better distinguished at once into a line, a furface, and a solid, than to say, as Ramus does, that quantity is either a line, or thing lined; and a thing lined is either a surface

or a folid.

d.

e

t

T

r

C.

5,

y

d d

d

6,

ld

it

ht

75

in ed to V. Rule. Distribute every subject according to the special design you have in view, so far as is necessary or useful to your present enquiry. Thus a politician distributes mankind, according to their civil characters, into the ruler, and the ruled; and physician divides them into the sick, or the healthy: but a divine distributes them into Turks, Heathers, Jews, or Christians.

Here note, That it is a very useless thing to distribute any idea into such kinds, or members, as have no different properties to be spoken of: as it is mere trifling to divide right angles into such whose legs are equal, and whose legs are unequal; for, as to the mere

right angle they have no different properties.

VI. Rule. In all your distributions observe the nature of things with great exactness; and do not affect any particular form of distribution, as some persons have done, by dividing every genus into two species, or into three species; whereas nature is infinitely various, and human affairs and human sciences have as great a variety:

variety: nor is there any one form of distribution that

will exactly fuit with all subjects.

Note, It is to this doctrine of distribution of a genus into its several species, we must also refer the distribution of a cause according to its several effects; as some medicines are heating, some are cooling: or an effect, when it is distinguished by its causes, as faith is either built upon the divine testimony or human. It is to this head we refer particular artificial bodies, when they are distinguished according to the matter they are made of; as a statue is either of brass, of marble, or wood, &c. and any other beings, when they are distin. guished according to their end and design; as the fur. niture of body or mind is either for ornament or use, To this head also we refer subjects when they are divided according to their modes or accidents; as men an either merry, or grave, or fad: and modes, when they are divided by their subjects, as distempers belong to the fluids, or to the folid parts of the animal.

It is also to this place we reduce the proposals of a difficulty, under its various cases, whether it be in speculation or practice; as to shew the reason of sun-beams burning wood, whether it be done by a convex glass or a concave, or to shew the construction and mensuration of triangles, whether you have two angles and a side given, or two sides and an angle, or only three sides. Here it is necessary to distribute or divide a difficulty into all its cases, in order to gain a perfect knowledge of

the subject you contemplate.

It might be observed here, that Logicians have some times given a mark or sign to distinguish when it is an integral whole, that it is divided into its parts or members, or when it is a genius, and universal whole, that is distributed into its species and individuals. The rule they give is this; whensoever the whole idea can be directly and properly affirmed of each part, as a bird is an animal, a fish is an animal, Bucephalus is a horse; Peter is a man, then it is a distribution of a genus into its species, or a species into its individuals: But when the whole cannot be thus directly affirmed concerning

feve the fay, ano

ing

eve

the Criticute inno dete

of G dom and cies

a ma

and j fusion his sta

all h
who
who
obstr

ing i

every part, then it is a division of an integral into its several species or members; as we cannot say the head, the breast, the hand, or the foot is an animal; but we say, the head is a part of the animal, and the foot is

another part.

t ].

that

enus

tri-

25

an

aith

t is

hen

are

or

lin-

ur-

use.

ded

are hey

the

pe-

of ide

es.

me

or

ole,

he

an

ird

e;

ito

en

ng

This rule may hold true generally in corporeal being, or perhaps in all substances: But when we say the Fear of God is wisdom, and so is human civility: Criticism is true learning, and so is Philosophy: To execute a Murderer is justice, and to save and defend the innocent is justice too. In these cases it is not so easily determined whether an integral whole be divided into its parts, or an universal into its species: For the fear of God may be called either one part or one kind of wisdom: criticism is one part, or one kind of learning: and the execution of a murderer may be called a species of justice as well as a part of it. Nor indeed is it a matter of great importance to determine this controversy.

#### SECT. XI.

# Of an orderly Conception of Things.

THE last rule to direct our conceptions is, that we should rank and place them in a proper method and just order. This is of necessary use to prevent confusion; for, as a trader who never places his goods in his shop or warehouse in a regular order, nor keeps the accounts of his buying and selling, paying and receiving in a just method, is in utmost danger of plunging all his affairs into confusion and ruin; so a student who is in the search of truth, or an author or teacher who communicates knowledge to others, will very much obstruct his design, and confound his own mind or the mind

rT

een

ent t

Su

1/1

T

fthe

nust

ot h

nd r

fury ;

bhica

but i

nify t

atio

name

s de

natu

Suited

heral

. 5

offinn

hem

ned b

tlude

which

comn there

the d

passic deed

W

mind of his hearers, unless he range his ideas in jult order.

If we would therefore become successful learners of teachers, we must not conceive of things in a consular heap, but dispose our ideas in some certain method, which may be most easy and useful both for the understanding and memory; and be sure as much as may be to follow the nature of things, for which many rules might be given, viz.

any subject, before you consider its accidentals.

2. Survey first the general parts and properties of an subject, before you extend your thoughts to discount

of the particular kind or species of it.

3. Contemplate things first in their own simple notures, and afterwards view them in composition with a ther things; unless it be your present purpose to take a compound being to pieces, in order to find out or the shew the nature of it by searching and discovering of what simples it is composed.

4. Consider the absolute modes or affections of any being, as it is in itself, before you proceed to consider the relatively; or to survey the various relations in which

it stands to other beings, &c.

Note, These rules chiefly belong to the method of

instruction which the learned call synthetick.

But in the regulation of our ideas there is feldom a absolute necessity that we should place them in this of the other particular method: it is possible in some cases that many methods may be equally good; that is may equally assist the understanding and the memory to same a method exquisitely accurate, according to the strict nature of things, and to maintain this accuracy from the beginning to the end of a treatise, is a most rare and difficult thing, if not impossible. But larger account of method would be very improper in this place, lest we anticipate what belongs to the fourth part of logick.

SECT

#### SECT. XII.

## Thefe five Rules of Conception exemplified.

T may be useful here to give a specimen of the five special rules to direct our conceptions, which have seen the chief subject of this long chapter, and represent them practically in one view.

Suppose the theme of our discourse were the passions

f the mind.

irt L

juff

ers or efufea

unmay rules

ils o

fan

our

na-

th o

take

or to

go

any

eri

hich

d d

n an

ome

at is

ory:

is 2

ut a

this

urth

1/1, To gain a clear and distinct idea of passion, we

nust define both the name and the thing.

To begin with the definition of the name. We are not here to understand the word passion in its vulgar and most limited sense, as it signifies merely anger or sury; nor do we take it in its most extensive philosophical sense, for the sustaining the action of an agent; but in the more limited philosophical sense, passions signify the various affections of the mind; such as admiration, love, or batred: this is the definition of the name.

We proceed to the definition of the thing. Passion is defined a sensation of some special commotion in animal nature, occasioned by the mind's perception of some object suited to excite that commotion.\* Here the genus, or general nature of passion, is a sensation of some special commotion.

L 2

<sup>\*</sup> Since this was written, I have published a short treatise of the possions, wherein I have so far varied from this definition as to call them sensible commotions of our whole nature, both soul and body occosioned by the mind's perception of the objects, &c. I made this alteration in the description of the passions in that book, chiefly to include in a more explicit manner the passions of desire and aversion, which are acts of volition rather than sensations. Yet since some commotions of animal nature attend all the passions, and since there is always a sensation of these commotions, I shall not change the definition I have written here; for this will agree to all the passions, whether they include any act of volition or not: nor indeed is the matter of any great importance, Nov. 17th, 1728.

C

bit

ad

th

tio

in

to

by

by

m

an

pe

uf

bu

tu ly

pr

pr

up

an

pr

lie

th

CC

motion in animal nature; and herein it agrees with hunger, thirst, pain, &c. The effential difference of it is, that this commotion arises from a thought or perception of the mind; and hereby it is distinguished from hunger thirst or pain

hunger, thirst, or pain.

2dly, We must conceive of it completely, or survey the several parts that compose it. These are, (1) The mind's perception of some object. (2.) The consequent rustle or special commotions of the nerves, and blood, and animal spirits. And, (3.) The sensation of this inward commotion.

rious properties. The most essential attributes that make up its nature has been already mentioned under the foregoing heads. Some of the most considerable properties that remain are these, viz. That passion belongs to all mankind in greater or lesser degrees: it is not constantly present with us, but upon some certain occasions: it is appointed by our Creator for various useful ends and purposes, viz. to give us vigour in the pursuit of what is good and agreeable to us, or in the avoidance of what is hurtful: it is very proper for our state of trial in this world; it is not utterly to be rooted out of our nature, but to be moderated and governed according to rules of virtue and religion, &c.

Athly, We must take cognizance of the various kinds of it, which is called an extensive conception of it. If the object which the mind perceives be very uncommon, it excites the passion of admiration: if the object appear agreeable, it raises love; if the agreeable object be absent and attainable, it is desirable: if likely to be obtained, it excites hope: if unattainable, despair: if it be present and possessed, it is the passion of joy: if loss, it excites sorrow: if the object be disagreeable, it causes in general hatred, or aversion: if it be absent, and yet we are in danger of it, it raises our fear: if it be pre-

fent, it is forrow and fadness, &c.

5thly, All these things, and many more which go to compose a treatise on this subject, must be placed in their proper order: A slight specimen of which is exhi-

tt I,

With

e of

per-

rom

The uent

and

vathat

ider

able

be-

t is

oceful

ur-

the

our

oted

ned

ous

it.

m-

ect ect

be

it

et e-

to

in

1-

bited in this short account of passion, and which that admirable author Descartes has treated of at large; though, for want of sufficient experiments and observations in natural philosophy, there are some sew mistakes in his account of animal nature.

#### SECT. XIII.

An Illustration of these five Rules of Similitudes.

THUS we have brought the first part of Logick to a conclusion: and it may not be improper here to represent its excellencies (so far as we have gone) by general hints of its chief design and use, as well as by a various comparison of it to those instruments which mankind have invented for their several conveniences and improvements.

The design of logick is not to furnish us with the perceiving faculty, but only to direct and affist us in the use of it: it doth not give us the objects of our ideas, but only casts such a light on those objects which nature furnishes us with, that they may be the more clearly and distinctly known: it doth not add new parts or properties, to things; but it discovers the various parts, properties, relations, and dependencies of one thing upon another, and by ranking all things under general and special heads, it renders the nature, or any of the properties, powers, and uses of a thing more easy to be found out, when we seek in what rank of beings it lies, and wherein it agrees with, and wherein it differs from others.

If any comparisons would illustrate this, it may be thus represented.

I. When Logick affifts us to attain a clear and distinct conception of the nature of things by definition, it is

n

like those glasses whereby we behold such objects distinctly, as by reason of their smallness, or their great distance appear in consusion to the naked eye: So the telescope discovers to us distant wonders in the heavens, and shews the milky way, and the bright cloudy spots in a very dark sky to be a collection of little stars, which the eye unassisted beholds in mingled consusion. So when bodies are too small for our sight to survey them distinctly, then the microscope is at hand for our affishance, to shew us all the limbs and features of the most minute animals, with great clearness and distinction.

II. When we are taught by Logick to view a thing completely in all its parts, by the help of division, it has the use of an anatomical knife, which dissects an animal body, and separates the veins, arteries, nerves, muscles, membranes, &c. and shews us the several parts which go to the composition of a complete animal.

III. When Logick instructs us to survey an object comprehensively in all the modes, properties, relations, faces, and appearances of it, it is of the same use as a terrestrial globe, which turning round on its axis represents to us all the variety of land and seas, kingdoms and nations, on the surface of the earth, in a very short succession of time; shews the situation and various relation of them to each other, and gives a comprehensive view of them in miniature.

IV. When this art teaches us to distribute any extensive idea into its different kinds or species, it may be
compared to the prismatick glass, that receives the
sun-beams or rays of light, which seem to be uniform when falling upon it; but it separates and distributes them into their different kinds and colours, and
ranks them in their proper succession.

Or, if we descend to subdivisions, and subordinate ranks of being, then distribution may also be said to form the resemblance of a natural tree, wherein the

genus

1

6

16

ne.

a-

dy

S,

n.

ur be

n.

15

as.

al

S

h

2

15:

e

).

2

Li

genus or general idea stands for the root or fock, and the several kinds or species, and individuals, are distributed abroad, and represented in their dependance and connexion, like the feveral boughs, branches, and leffer foots. For instance, let animal be the root of a logical tree, the resemblance is seen by mere inspection, though the root be not placed at the bottom of the page.

The fame fimilitude will ferve also to illustrate the division and subdivision of an integral whole, into its feveral parts.

When.

When Logick directs us to place all our ideas in a proper method, most convenient both for instruction and memory, it doth the same service as the cases of well contrived shelves in a large library, wherein solio's quarto's octavo's, and lesser volumes, are disposed in such exact order, under the particular heads of divinity, history, mathematicks, ancient and miscellaneous learning, &c. that the student knows where to find every book, and has them all as it were within his command at once, because of the exact order wherein they are placed.

The man who has fuch affistances as these at hand, in order to manage his conceptions and regulate his ideas, is well prepared to improve his knowledge, and to join those ideas together, in a regular manner, by judgment, which is the second operation of the mind, and

will be the subject of the second part of Logick.

THE

I

n

n

THE

# SECOND PART

OF

# LOGICK:

### Of Judgment and Proposition.

HEN the mind has got acquaintance with things, by framing ideas of them, it proceeds to the next operation, and that is, to compare these ideas together, and join them by affirmation, or disjoin them by negation, according as we find them to agree or disagree. This act of the mind is called Judgment; as when we have, by perception, obtained the ideas of Plato, a philosopher, man, innocent, we form these judgments; Plato was a philosopher; no man is innocent.

Some writers have asserted, that judgment consists in a mere perception of the agreement or disagreement of ideas

least in most cases) necessary to form a judgment; for, though we do perceive, or think we perceive ideas toagree or disagree, yet we may sometimes refrain from judging or assenting to the perception; for fear less the perception should not be sufficiently clear, and we should be mistaken, and I am well assured at other times, that there are multitudes of judgments formed, and a firm assent given to ideas joined or disjoined, before there is any clear conception whether they agree or disagree; and this is the reason of so many faise judgments or mitakes among men. Both these practices are a proof that judgment has something of the will in it, and does not merely consist in perception, since we sometimes judge (though unhappily) without perceiving, and sometimes we perceive with immediate judging.

As an idea is the result of our conception, or apprehension, so a proposition is the effect of judgment. The foregoing sentences, which are examples of the act of judgment, are properly called propositions. Plate was a

philosopher, &c.

Here let us consider,

1. The general Nature of a proposition, and the parts of which it is composed.

2. The various Divisions or kinds of propositions.

3. The strings of false judgment, or the doctrine of prejudices.

4. General Directions to assist us in judging aright.

5. Special Rules to direct us in judging particular objects.

#### CHAP. I.

Of the Nature of a Proposition, and its several Parts.

A Proposition is a sentence wherein two or more ideas or terms are joined or disjoined by one affirmation or negation, as, Plato was a philosopher: every angle is formed by two lines meeting: no man living on earth can be completely happy. When there are ever so many ideas or terms in the sentence, yet if they are joined or disjoined merely by one single affirmation or negation, they are properly called but one proposition, though they may be resolved into several propositions which are implied therein, as will appear hereafter.

In discribing a proposition I use the words terms as well as ideas, because when mere ideas are joined in the mind without words, it is rather called a judgment; but when clothed with words, it is called a proposition, even though it be in the mind only, as well as when it is

expressed by speaking or writing.

There are three things which go to the nature and constitution of a proposition, (viz.) the subject, the

predicate, and the copula.

The fubject of a proposition is that concerning which any thing is affirmed or denied: So Plato, Angle, Man living on earth, are the subjects of the foregoing propositions.

The predicate, is that which is affirmed or denied of the subject: so philosopher is the predicate of the first proposition; formed by two lines meeting, is the predicate of the second; capable of being completely happy, is the proper predicate of the third.

The

The fubject and predicate of a proposition taken to. gether, are called the matter of it; for these are the materials of which it is made.

The Copula is the form of a proposition; it represents the act of the mind affirming or denying, and it is expressed by these words, am, art, is, are, &c. or, am not,

art not, is not, are not, &c.

It is not a thing of importance enough to create a dispute, whether the words no, none, not, never, &c. which disjoin the idea or terms in a negative proposition, shall be called a part of the subject of the copula, or of the predicate. Sometimes perhaps they may seem most naturally to be included in one, and sometimes in in another of these, though a proposition is usually denominated affirmative or negative by its copula, as hereafter.

Note 1. Where each of these parts of a proposition is not expressed distinctly, in so many words, yet they are all understood, and implicitly contained therein; as socrates disputed, is a complete proposition, for it signifies Socrates was disputing. So I die, signifies I am dying. I can write, i. e. I am able to write. In Latin and Greek one single word is many times a complete proposition.

Note 2. These words, am, art, is, &c. when they are used alone, without any other predicate, signify both the act of the mind judging, which includes the copula, and signify also actual existence, which is the predicate of that proposition. So Rome is, signifies Rome is existent: there are some strange monsters; that is, some strange monsters are existent: Carthage is no more, i.e.

Carthage has no being.

Note 3. The subject and predicate of a proposition are not always to be known and distinguished, by the placing of the words in the sentence, but by reslecting duly on the sense of the words, and on the mind and design of the speaker or writer: As if I say, in Africa there are many lions; I mean, many lions are existent in Africa: Many lions is the subject, as existent in Africa;

oug tern it is

to

pre

cop

rule
I of the

hom

and

Soci still here hav will not

fitio

diffe

of the famous properties to be day plain

defin mea

311

1.

1.

ts

K-

C.

1-

a,

n

n

is

e

bilaig

Africa, is the predicate. It is proper for a philosopher to understand Geometry; here the word proper is the predicate, and all the rest is the subject, except Is the

copula.

Note 4. The subject and predicate of a proposition ought always to be two different ideas, or two different terms; for where both the terms and ideas are the same, itis called an indentical proposition, which is mere trifling, and cannot tend to promote knowledge; such as, a

rule is a rule, or a good man is a good man.

But there are some propositions, wherein the terms of the fubject and predicate feem to be the fame; yet the ideas are not the same; nor can these be called purely indentical, or trifling propositions; such as home is home; that is, home is a convenient or delightful place; Socrates is Socrates still; that is, the man Socrates is fill a philosopher: the hero was not a hero; that is, the hero did not shew his courage: what I have written I have written; that is, what I wrote I still approve, and will not alter it; what is done is done; that is, it cannot be undone. It may be easily observed in these propofitions the term is equivocal, for in the predicate it has a different idea from what it has in the fubject.

There are also some propositions wherein the terms of the subject and predicate differ, but the ideas are the same; and these are not merely indentical or trifling propositions; as impudent is shameless; a billow is a wave; or fluctus (in Latin) is a wave; a globe is a round body. In these propositions either the words are explained by a definition of the name, or the ideas of a definition of the things; and therefore they are by no

means useless when formed for this purpose. off many angula dies of hate M a real of the late, and

trofe forgies or individually whole reported nature in cx-

- A tortionar propertion is when the led to belie not us-PAHD day to its whole exten on that its which CHAP. to near to and early to the content of the barmil at mise

reachy there, storus, oll,

. . aminima what

all

or

fo

tu

it

it.

of

is

C

I

chiuse, isstice edicute. Itself from the companies the state of philosopher in males flate! Georges we have store the consent to open in the

# Note at The Cobject and predicate of a propolition ought abveys to be so. II ji (. A. A. W.), or two different terms; for where both the trove and these are the time.

# Of the various Kinds of Propositions.

many of a few man is a few man is a fine man

Ropositions may be distributed into various kinds, according to their subject, their copula, their preducate, their nature, or composition, their sense, and their evidence; which distributions will be explained in the following sections.

# SECT. I. when the believe were

will not coller it? what a date of collect the to

follow policioners the fore required a horse that is, the

Of universal, particular, indefinite, and singular Propo-

There are also force propositions, wherein the lengt

Propositions may be divided according to their subject, into universal and particular; this is usually called a division arising from the quantity.

An universal proposition is when the subject is taken according to the whole of its extension; so, if the subject be a genus, or a general nature, it includes all its species or kinds: if the subject be a species, it includes all its individuals. This universality is usually signified by these words, all, every, no, none, or the like; as, all men must die: no man is Almighty: every creature had a beginning.

A particular proposition is when the subject is not taken according to its whole extension; that is, when the term is limited and restrained to some one or more of those species or individuals, whose general nature it ex-

preffe

12.

110

Mi.

e-

ir

le

ib

presses but reaches not to all; and this is usually denoted by the words, some, many, a few, there are which, &c. as some birds can fing well few men are truly wise: there are parrots which will talk a hundred things.

Under the general name of universal propositions, we may justly include those that are fingular, and for

the most part those that are indefinite also.

A fingular proposition is when the subject is a singular or individual term or idea: as Descartes was an ingenious philosopher: Sir Isaac Newton has far exceeded all his predeceffors: The Palace at Hampton-Court is a bleafant dwelling: This day is very cold. The subject here must be taken according to the whole of its extention, because being an individual it can extend only to one, and it must therefore be regulated by the laws of

universal propositions.

An indefinite proposition is when no note, either of universality or particularity is prefixed to a subject, which is in its own nature general; as a planet is ever changing its place; angels are noble creatures. Now, this fort of proposition, especially when it describes the nature of things, is usually counted univerfal also; and it supposes the subject to be taken in its whole extenfion; for, if there were any planet which did not change its place, or any angel that was not a noble creature, these propositions would not be strictly true.

Yet in order to secure us against mistake in judging of universal, particular, and indefinite propositions, it

is necessary to make these following remarks.

1. Concerning universal propositions.

Note 1. Universal terms may either denote a meta-

physical, a physical, or a moral universality.

A metaphysical or mathematical universality is when all the particulars contained under any general idea have the same predicate belonging to them, without any exception whatever; or when the predicate is fo ellential to the univerfal subject, that it destroys the very nature of the subject to be without it; as, all circles have

thi

fha

cha

diff

111

COL

eve

fal

in t

tiv

tair

fick

duc

inc

wh

or

kin

diff

is a

the

uni

refl

all

ject

lear

lan

710

are

al,

ftra

1100

poli

fea!

a center and circumference; all spirits in their own na-

A physical or natural universality is when, according to the order and common course of nature, a predicate agrees to all the subjects of that kind, though there may be some accidental and preternatural exceptions; as, a'l men use words to express their thoughts, yet dumb persons are excepted, for they cannot speak. All beasts have four feet, yet there may be some monsters with sive; or maimed, who have but three.

A pnoral universality is when the predicate agrees to the greatest part of the particulars which are contained under the universal subject; as, all negroes are stupid creatures: all men are governed by affection rather than by reason: all the old Romans loved their own country: and the scripture uses this language, when St. Paul tells us, The Cretes are always liars.

Now, it is evident, that a special or singular conclufion cannot be inferred from a nural universality, nor always and infallibly from a physical one, though it may be always inferred from a universality which is metaphysical without any danger or possibility of a mistake.

Let it be observed also, that usually we make little or no distinction in common language, between a subject that is physically or metaphysically universal.

Note 2. An universal term is sometimes taken collectively for all its particular ideas united together; and sometimes distributively, meaning each of them single and alone.

Instances of a collective universal are such as these: All these Apples will fill a bushel: all the hours of the night are sufficient for steep: all the rules of grammar overload the memory. In these propositions it is evident, that the predicate belongs not to the individuals separately, but to the whole collective idea; for we cannot affirm the same predicate, if we change the word all into one, or into every; we cannot say the apple, or every apple will fill a bushel, &c. Now, such a collective idea, when it becomes the subject of a proposition,

14-

ng

ate

ere

18;

mb

All

ers

to

ed

oid

an

y:

zul

u-

or

y-

tle

**b**-

1-

nd

le

be

25

i-

ls

re

e

-

2

tion, ought to be esteemed as one single thing, and this renders the proposition fingular or indefinite, as we shall shew immediately.

A distributive universal will allow the word all to be changed into every, or into one; and by this means is

diffinguished from a collective.

Instances of a distributive universal are the most common on every occasion; as, all men are mertal; every man is a sinner, &c. But in this sort of universal there is a distinction to be made, which follows in the next remark.

Note 3. When an universal term is taken distributively, sometimes it includes all the individuals contained in its inserior species: As when I say every suckness has a tendency to death; I mean, every individual sickness, as well as every kind. But sometimes it includes no more than merely each species or kind; as when the Evangelist says, Christ healed every disease, or every disease was healed by Christ; that is, every kind of disease. The first of these logicians call the distribution of an universal in singula generum; the last is a distribution in genera singularum. But either of them, joined to the subject, render a proposition universal.

Note 4. The universality of a subject is often restrained by a part of the predicate: as when we say all men learn wisdom by experience: the universal subject, all men is limited to signify only, all these men who learn wisdom. The scripture also uses this fort of language, when it speaks of all men being justified by the righteousness of one, Rom. v. 18.2 that is, all men who

are justified obtain it this way an nothing to

Observe here, that not only a metaphysical or natural, but a moral universality also is oftentimes to be restrained by a part of predicate; as when we say, all the Dutch are good seamen: all the Italians are subtle

feamen are good feamen; and the among the Italians,

odwargress are lingia geMires.

who are politicians, are subtle politicians, i.e. they

are generally fo.

Note 5. The universality of a term is many times restrained by the particular time, place, circumstance, &c. or the design of the speaker; as if we are in the city of London, and say, all the weavers went to present their petition; we mean only all the weavers who dwell in the city. So, when it is said in the gospel, all men did marvel, Mark v. 20, it reaches only to all those men, who heard of the miracles of our Saviour.

Here also it should be observed, that a moral univerfality is restrained by time, place, and other circumstances, as well as a natural; so that by these means the word all sometimes does not extend to a tenth part of those who at first might seem to be included in that

word.

One occasion of these difficulties and ambiguities, that belong to universal propositions, is the common humour and temper of mankind, who generally have an inclination to magnify their ideas, and to talk roundly and universally concerning any thing they speak of; which has introduced universal terms of speech into custom and habit, in all nations and all languages, more than nature or reason would dictate; yet when this custom is introduced, it is not at all improper to use this sort of language in solemn and sacred writings, as well as in familiar discourse.

II. Remarks concerning indefinite propositions.

Note 1. Propositions carrying in them universal forms of expression may sometimes drop the note of universality, and become indefinite, and yet retain the same universal sense, whether metaphysical, natural, or moral, whether collective or distributive.

We may give instances of each of these.

Metaphylical; as, a circle has a center and circumference. Natural: as, beasts have four feet. Moral; as, negroes are stupid creatures. Collective; as the apple ide and fub

one mo

the

pla wh ing filk pea

ind app

no

exp pre are

som men fo t

gen the

es

Ce,

nt

en

ofe

r-

n-

of

11

n

e

k

y

f

d

n

C. II. & I.

apples will fill a lufbel. Distributive ; as, men are

139

mortal. Note 2. There are many cases wherein a collective idea is expressed in a proposition by an indefinite term, and that where it describes the nature or quality of the subject, as well as when it declares some past matters of fact; as fir-trees fet in good order will give a charming prospect; this must signify a collection of fir-trees, for one makes no prospect. In matters of fact this is more evident and frequent; as, The Romans overcame the Gauls: The robbers surrounded the coach: The wild geefe flew over the Thames, in the form of a wedge. All these are collective subjects.

Note 3. In indefinite propositions, the subject is often restrained by the predicate, or by the special time, place, or circumstances, as well as in propositions which are expressly universal; as, The Chineses are ingenious silk-weavers, i. e. those Chineses, which are filk weavers are ingenious at their work. The flars appear to us when the twilight is gone. This can fignify no more than the flars which are above our horizon.

Note 4. All these restrictions tend to reduce some indefinite propositions amost into particular, as will

appear under the next remarks.

III. Remarks concerning particular propositions.

Note I. A particular proposition may sometimes be expressed indefinitely, without my note of particularity prefixed to the subject; as, in times of confusion, laws are not executed: men of virtue are diffraced, and murtherers escape; i. e. some laws, some men of virtue, some murtherers : Unless we should call this language a moral universality, though I think it can hardly extend fo far.

Note 2. The words some, a few, &c. though they generally denote a proper particularity, ye fometimes they express a collective idea; as, some of be enemies beset the general around. A few Greeks would beat a thousand Indians.

Ţ.,

cal

ful

fal

iar

the M

gre

tou

fir

it

fiti

pro

uni

gu

cee fey

of we lan

cir

tra

WI

joi pre

I conclude this fection with a few general remarks on this subject, viz.

Gen. Rem. I. Since universal indefinite, and particular terms, in the plural number, may either be' taken in a collective or distributive fense, there is one for and eafy way to find when they are collective and when distributive, (viz.) if the Plural number may be change ed into the fingular, i.e. if the predicate will agree to one fingle subject, it is a distributive idea; if not, it is collective.

Gen. Rem. II. Universal and particular terms in the plural number, such as, all, some, few, many, &c. when they are taken in their diffributive fenfe; represent feveral single ideas; and when they are thus affixed to the subject of a proposition, render that proportion universal or particular, according to the universality or particularity of the terms affixed.

Gen. Rem. III. Universal and particular terms in the plural number, taken in their collective sense, represent generally one collective sea.

If this one collective idea be thus represented (whether by universal or particular terms) as the subject of a proposition which describes the nature of a thing, it properly makes either a fingular or an indefinite pro-position; for the words, all, some, a sew, &c, do not then denote the quantity of the proposition, but are effeemed merely as tems which connect the individuals together, in order to compose one collective idea observe these instances, all the sycomores in the garden would make a large grove; i. e. this one collection of fycomores which is a singular-idea. Some of the fycomores in thegarden would make a fine grove. Syco-mores would make a noble grove. In these last the subject is rathe indefinite than lingular. But it is very evident, that in each of these propositions the predicate seatand Indians.

II.

'n

'n

'n

is

111

1

r

can only belong to a collective idea; and therefore the

subject must be esteemed a collective.

If this collective idea (whether represented by univerfal or particular terms) be used in describing past matter, of sall, then it is generally to be esteemed a singuiar idea, and renders the proposition singular; as all the soldiers of Alexander made but a little army. A sew Macedonians vanquished the large army of Darius; some grenadiers, in the camp, plundered all the neighbouring towns.

Now, we have shewn before, that if a proposition defiribing the nature of things, has an indefinite subject, it is generally to be esteemed universal in its propositionable sense; and if it has a singular subject, in its propositionable sense; it is always ranked with

universals.

After all we must be forced to consess, that the language of mankind, and the idioms of speech are so exceeding various, that it is hard to reduce them to a sew rules: and if we would gain a just and precise idea of every universal, particular, and indefinite expression, we must not only consider the particular idiom of the language, but the time, the place, the occasion, the circumstances of the matter spoken of; and thus penetrate as far as possible into the design of the speaker or writer.

be difficult to levinor rose of diffin of day: a when we day, such what so just Cites was in the

thank to determine whether they right pairly or police. To there are very marker conducted which it me

Of affirmative and negative Propositions.

WHEN a proposition is considered with regard it s copula, it may be divided into affirmative and negative; for it is the copula, that joins or disjoins the two ideas. Others call this a division of propositions according to their quality.

An

C.

in c

clar

we in I

3

to 1

not"

the

man con

5

is ta

and

the

fo,

cluc

foev F

fere

hen

thei

we

thir

diffi

that

Yn

100

K VI

-01

201

4 cate effe

An affirmative proposition is when the idea of the predicate is supposed to agree to the idea of the subject, and is joined to it by the word is, or are, which are the copula: as, all men dre summers. But when the predicate is not supposed to agree with the subject, and is disjoined from it by the particles, is not, are not, at the proposition is negative, as, Man is not innotent or, no man is innocent. In an affirmative proposition we affert one thing to belong to another, and, as a were, unite them in thought and word: In negative propositions we separate one thing from another, and deny their agreement.

It may feem something odd, that two ideas or terms are said to be disjoined as well as joined by a copulation but if we can but suppose the negative particles do really belong to the copula of negative propositions, it takes away the harshness of the expression; and to make it yet softer, we may consider that the predicate and subject may be properly said to be joined in a form of words as a proposition, by connective particles in Grammar or Logick, though they are disjoined in their sense and signification. Every youth, who has learned his grammar, knows there are such words as dis-

juntlive conjunttions.

Several things are worthy our notice on this subject. If Note. As there are some terms, or words, and ideas (as I have shewn before) concerning which it is hard to determine whether they are negative or positive; so there are some propositions concerning which it may be difficult to say, whether they affirm or deny: as, when we say, Plato was no fool: Cicero was no unskilful orator: Cæsar made no expedition to Muscovy: an oyster has no part like an eel: it is not necessary for a physician to speak French: and for a physician to speak French is needless. The sense of these propositions is very plain and easy, though logicians might squabole perhaps a whole day, whether they should rank them under the names of negative or affirmative.

opolitions according to their quality

II.

pre-

eी, बार

the

&c.

nt;

tion

it

true

and

ms

la:

do

it

ate

TM.

in

eir

led

ij.

a.

nd

is

e;

ay

is,

nan

1k

is

n

d

2d Note. In Latin and English two negatives joined in one sentence make an affirmative; as when we declare, no man is not mortal; it is the same as though we said, man is mortal. But in Greek, and oftentimes in French, two negatives make but a stronger denial.

3d Note. If the mere negative term, not, he added to the copula of an universal affirmative proposition, it reduces it to a particular negative; as, all men are not wife, fignifies the same as, some men are not wife.

4th Note. In all affirmative propositions, the predicate is taken in its whole comprehension; that is, every effential part and attribute of it is affirmed concerning the subject; as when I say, a true christian is an bonest man, every thing that belongs to honesty is affirmed concerning a true Christian.

5th Note. In all negative propositions the predicate is taken in its whole extension; that is, every species and individual, that is contained in the general idea of the predicate, is utterly denied concerning the subject so, in this proposition, a spirit is an animal, we exclude all forts and kinds, and particular animals whatsoever, from the idea of a spirit:

From these two last remarks we may derive this inserence, that we ought to attend to the entire comprehension of our ideas, and to the universal extension of
them, as far as we have proper capacity for it, before
we grow too consident in our affirming or denying any
thing, which may have the least darkness, doubt, or
difficulty attending it: it is the want of this attention
that betrays us into many mistakes.

The Logicians of the schools have written meny large triffes concerning the oppositions and metership of propositions. It will be sufficient here to give a secretary biasts of these thanks, that the lessue will not be utterly ignorant of them.

Propolitions.

<sup>\*</sup> The Resder bould, on anther here, that a proposition at his ing ter its on ability is talled an employed or continuous and according to its other officenties or regarder.

2d New In Low and English even presacress introdu

(

11

in

fa

A

ri

ar

I

0

gr

tei

fit

or

be

CO

fa

fo

# and hence make. In a trong a when we de-

# Of the Opposition and Conversion of Propositionals

ANY two ideas being joined or disjoined in various forms will afford us feveral propositions: All these may be distinguished according to their quantity\* into sour, which are marked or denoted by the letters A, E, I, O, thus:

Universal Affirmative.

Universal Affirmative.

Universal Negative.

Particular Affirmative.

Particular Negative.

according to these old Latin Rymes.

Afferit A, Negat E, verum generaliter Ambo;
Afferit I, Negat O, sed particulariter Ambo.

This may be exemplified by these two ideas, a Vine and a Tree.

one A Every Vine is a Tree of tradition on work w

E No Vine is a Tree, who would wone dandw and

I Some Vine is a Trea.

O Some Vine is not a Tree. In Character and led

The Logicians of the schools have written many large trifles concerning the opposition and conversion of propositions. It will be sufficient here to give a few brief hints of these things, that the learner may not be utterly ignorant of them.

Propositions

The Reader should remember here, that a proposition according to its quantity is called universal or particular; and according to its quality, it is either affirmative or negative.

IIij

n-

he,

103

Propositions which are made of the same subject and predicate are said to be opposite, when that which is denied in one is affirmed in the other, either in whole or in part, without any consideration whether the propofitions be true or no.

If they differ both in quantity and quality they are

faid to be contradictory; as,

A Every Vine is a These can never be both true, or O Some Vine is not \ both false at the same time. a Tree. than but with me it with

If two universals differ in quality, they are contraries; as, so to be so of less of main , notthogora

A Every Vine is a Tree. These can never be both true toge-E No Vine is a ( ther, but they may be both false.

Tree.

If two particular propositions differ in quality they

are subcontraries. The ray solution and the transport I Some Vine is a These may be both true together, Tree but they can never be both O Some Vine is C falle. not a Tree.

Both particular and universal propositions which agree in quality, but not in quantity, are called fubaltern, though these are not properly opposite, as,

A Every Vine is a Tree. I Some Vine is a Tree.

Or thus,

E No Vine is a Tree.

O Some Vine is not a Tree.

The canons of fubalternate propositions are usually reckoned these three, viz. (1.) If an universal propofition be true, the particular, will be true also, but not on the contrary. And (2.) If a particular proposition be false, the universal must be false, but not on the contray. (3.) Subaltern propositions, whether un verfal or particular, may fometimes be both true, and sometimes both false. In host much soil be leterement

the

a t

pro

the

dic

pre

vei

tha thi

clu

oc

tw.

fch

ma

tin

glo

mu

dal

The conversion of propositions is when the subject and predicate change their places with preservation of the truth. This may be done with constant certainty in all universal negatives and particular affirmatives; as, no spirit is an animal, may be converted, no animal is a spirit; and some tree is a vine, may be converted, some vine is a tree. But there is more formal trisling in this sort of discourse than there is of solid improvement, because this sort of conversion arises merely from the form of words, as connected in a proposition,

rather than from the matter.

Yet it may be useful to observe, that there are some propositions, which by reason of the ideas or matter of which they are composed may be converted with con-Stant truth: such are those propositions whose predicate is a nominal or real definition of the subject, or the difference of it, or a property of the fourth kind, or a superlative degree of any property or quality what. foever, or in short, wherefoever the predicate and the fubject have exactly the same extension or the same comprehension; as, every vine is a tree bearing grapes; and every tree bearing grapes is a vine : religion is the truest wisdom, and the truest wisdom is religion: Julius Cafar was the first emperor of Rome; and the first Emperor of Rome was Julius Cafar. These are the propolitions which are properly convertible, and they are called reciprocal propositions.

### SECT. IV.

Product as restricted the dist

Social Minores as H. ( . ) and Shart sind become

### Of pure and modal Propositions.

A Nother division of propositions among the school lastick writers, is into pure and modal. This may be called (for distinction sake) adivision according to the predicate.

of

S,

of

When a proposition merely expresses that the predicate is connected with the subject, it is called a pure proposition; as, every true Christian is an honest man. But when it includes also the way and manner wherein the predicate is connected with the subject, it is called a modal proposition; as, when I say, it is necessary that

a true christian should be an honest man.

Logical writers generally make the modality of this propolition to belong to the copula, because it shews the manner of the connexion between subject and predicate. But if the form of the sentence, as a logical proposition, be duly considered, the mode itself is the very predicate of the proposition, and it must run thus that a true christian should be an honest man is a necessary thing, and then the whole primary proposition is included in the subject of the modal proposition.

There are four modes of connecting the predicate with the subject which are usually reckoned upon this occasion, (viz.) necessity and contingency, which are two opposites; possibility and impossibility, which are also two opposites; as, it is necessary that a globe should be round; that a globe be made of wood or glass is an unnecessary or contingent thing: it is impossible that a globe should be square: it is possible that a globe may be

made of water.

With regard to the modal propositions which the schools have introduced, I would make these two re-

marks:

Remark 1. These propositions in English are formed by the resolution of the words, must be, might not be, can be, and cannot be, into those more explicate forms of a logical copula and predicate, is necessary, is contingent, is possible, is impossible: For it is necessary that a globe should be round, signifies no more than that a globe must be round.

Remark 2 Let it be noted, that this quadruple modality is only an enumeration of the natural modes or manners wherein the predicate is connected with the fubject:

to

th Bu

do

pa

ex

is

ma

it;

wh

(D)

subject: we might also describe several meral and civil modes of connecting two ideas together (viz.) lawful. nefs and unlawfulnefs, conveniency and inconveniency, &c. whence we may form fuch modal propositions as these; It is unlawful for any person to kill an innocent man! It is lawful for christians to eat flesh in Lent: To tell all that we think is expedient: For a man to be affable to his neighbour is very convenient, &c.

There are several other modes of speaking whereby a predicate is connected with a subject: such as, it is certain, it is doubtful, it is probable, it is improbable, it is agreed, it is granted, it is faid by the ancients, it is written, &c. all which will form other kinds of modal propositions.

But whether the modality be natural, moral, &c. yet in all these propositions it is the mode is the proper predicate, and all the rest of the propositions, except the copula (or word is) belongs to the subject; and thus they become pure propositions of a complex nature, of which we shall treat in the the next fection, so that there is no great need of making modals a distinct fort.

There are many little subtleties which the schoolsacquaint us with concerning the conversion and apposition and equipollence of these modal propositions, suited to the Latin or Greek tongues, rather than the English and fit to pais away the time of a Student, rather than

to enrich his undeftanding.

#### by the refolution of the words, set if it, might ask I in the and one or SECT. W. V. to me has sales.

dalomed conde and indicate, it wilders,

Remark 1. These exopolisions in Erecht are formed

Of single Propositions, whether simple or complex.

THEN we confider the nature of propositions, together with the formation of them, and the materials whereof they are made, we divide them into fingle and compound.

1

II.

A fingle proposition is that which has but one subject and one predicate; but if it has more subjects or more predicates, it is called a compound proposition, and indeed it contains two or more propositions in it.

A fingle proposition (which is also called categorical)

may be divided again into fimple and complex.\*

A purely simple prosipetion is that whose subject and predicate are made up of single terms; as virtue is de-sirable: every penitent is pardoned: no man is innocent.

When the subject or predicate, or both, are made up of complex terms, it is called a complex proposition; as, every sincere penitent is pardoned; virtue is desirable for its own sake; no man alive is perfectly innocent.

If the term which is added to the subject of a complex proposition be either essential or any way necessary to it, then it is called explicative, for it only explains the subject; as, every moral man is a son of Adam. But if the term added to make up the complex subject does not necessarily or constantly belong to it, then it is determinative, and limits the subject to a particular part of its extension; as, every pious man shall be happy. In the sirst proposition the word mortal is merely explicative: in the second proposition the word pious is determinative.

Here note, that whatsoever may be affirmed or denied concerning any subject, with an explicative addition, may be also affirmed or denied of that subject without it; as we may boldly say, every man is a son of Adam, as well as every mortal man: but it is not so, where the addition is determinative; for we cannot say, every man shall be happy, though every pious man shall be so.

In a complex proposition the predicate or subject is sometimes made complex by the pronouns who, which, whose, to whom, &c. which make another proposition;

N June one to the training and

As simple ideas are opposed to complex, and single ideas to compound, so propositions are distinguished in the same manner: The English tongue in this respect having some advantage above the learned languages, which have no usual word to distinguish single: som simple.

LOGICK

as every man, who is pious, shall be faved: Juhus, whose Sirname was Cafar, overcame Pompey; bodier which are transparent, have many pores. Here the whole proposition is called the primary or thief, and the additional proposition is called an incident proposition. But it is still to be esteemed in this case merely as a part of the complex term; and the truth or falshood of the whole complex proposition is not to be judged by the truth or falshood of the incident proposition, but by the connexion of the whole subject with the predicate. For the incident proposition may be false, and absurd, or impossible, and yet the whole complex proposition may be true, as a barfe, which has wings, might fly over the Themes.

Besides this complexion which belongs to the subject or predicate, logical writers use to fay, there is a complexion which may fall upon the copula alfo; but this I have accounted for in the fection concerning modal propositions; and indeed it is not of much importance

whether it were placed there or here.

#### againstive: in the succeed proportion the word came VI. soinmin ent il SECT. Here note, that whatforver may be affected or deal-

el concerning any turied, with an electronic addition,

In the field peopolition the word merkly is morely

#### traybe also affirmed or denied of that Jobies's werborn Of Compound Propositions. as vely as every mortal man; but it is not to, where

0

ā

n

Compound Proposition is made up on two or more fubjects or predicates, or both; and it contains in it two or more propolitions, which are either plain!

expressed, or concealed and implied.

The first fort of compound propositions are those wherein the composition is expressed and evident, and they are distinguished into these six kinds, (viz.) copulative, disjunctive, conditional, causal, relative, and diferetives will bet brow land on arad dadw Per Sugale.

e

ıl

e.

17

0

d

I. Copulative propositions are these which have more subjects or predicates connected by affirmative or negative conjunctions; as riches and honors are temptations to pride: Cafar conquered the Gauls and the Bris tons: neither gold nor jewels will purchase immortality. These propositions are evidently compounded, for each of them may be refolved into two propositions, Vviz. I riches are temptations to pride, and bonor is a temptation to pride, and fo the relt. and to how, slist or

The truth of copulative propositions depends upon the truth of all the parts of them; for, if Cafar had conquered the Gauls, and not the Britons, or the Britons and not the Gauls, the second copulative proposi-

fion had not been true.

Here note, those propositions, which cannot be refolved into two or more fimple propositions, are not properly copulative, though two or more ideas be connected and coupled-by fuch conjunctions, either in the fubject or predicate; as, two and three makes five: Majefty and meekness do not often meet: The Sun, Moon, and Stars are not all to be feen at once. Such propositions are to be esteemed merely complex, because the predicate cannot be affirmed of each fingle subject, but only of all them together as a collective fubject.

II. Disjunctive propositions are when the parts are disjoined, or opposed to one another by disjunctive particles; as, it is either day or night; the weather is either fining or rainy: quantity is either length, breadth, or depth.

The truth of disjunctives depends on the necessary and immediate opposition of the parts; therefore only the last of these examples is true; but the two first are not strictly true, becaused twilight is a medium between day and night; and dry, cloudy weather is a medium between shining and raining.

III. Conditional or hypothetical propositions are those whose parts are united by the conditional particle if

tho

his

der

die

he

the

it s

qua

Spok

for

hoo

alfo

fitio

dici

dife

the

the

nig

or

fo

doe

ind

pol

fal

the

po

29

to

as, If the fun were fixed. the earth must move: If there be no fire, there will be no smoke.

Note, The first part of these propositions, or that wherein the condition is contained, is called the aute-

cedent, the other is called the confequent.

The truth of these propositions depends not at all on the truth and falshood of their two parts, but on the truth of the connexion of them; for each part of them may be false, and yet the whole proposition true; as, if there be no providence, there will be no future judgment.

IV. Causal propositions are where two propositions are joined by causal particles; as, bouses were not built that they might be destroyed; Reboboam was unhappy be-

cause be followed evil counsel.

The truth of a causal proposition arises not from the truth of the parts, but from the causal influence that the one part of it has upon the other; for both parts may be true, yet the proposition false, if one part be not the cause of the other.

Some Logicians refer reduplicative propositions to this place; as, Men considered as men, are rational crea-

tures, i. e. because they are men.

V. Relative propositions have their parts joined by such particles, as express a relation or comparison of one thing to another; as, when you are silent, I will speak; as much as you are worth, so much you shall be esteemed; as is the Father so is the Son; where there is no tale bearer, contention will cease.

These are very much a-kin to conditional propositions, and the truth of them depends upon the justness

of their connexion.

VI. Discretive propositions are such wherein various and seemingly opposite judgments are made, whose variety or distinction is noted by the particles ut, though

though, yet, &c.; as, travellers may change their climote, but not their temper; fob was patient, though

his grief was great.

The truth and goodness of a discretive proposition depends on the truth of both parts, and their contradiction to one another; for, though both parts should be true, yet if there be no seeming opposition between them, it is an useless assertion, though we cannot call it a false one; as, Descartes was a philosopher, yet he was a Frenchman; the Romans were valiant, but they spoke Latin; both which propositions are ridiculous, for want of a seeming opposition between the parts.

Since we have declared wherein the truth and falfbeed of these compound propositions consist, it is proper also to give some intimations how any of these propositions, when they are false, may be opposed or contra-

dicted.

All compound propositions, except copulatives and discretives, are properly denied or contradicted when the negation affects their conjunctive particles; as, if the disjunctive proposition affects, it is either day or night. The opponent says, it is not either day or night; or it is not necessary that it should be either day or night; so the hypothetical proposition is denied by saying, it does not follow that the earth must move, if the sun be fixed.

A disjunctive proposition may be contradicted also by denying all the parts; as, it is neither day nor night:

And a caufal proposition may be denied or opposed indirectly and improperly, when either part of the proposition is denied; and it must be false if either part be false; but the design of the proposition being to shew the causal connexion of the two parts, each part is supposed to be true, and it is not properly contradicted as a causal proposition, unless one part of it be denied to be the cause of the other.

As for copulatives and discretives, because their truth depends more on the truth of their parts, therefore these

w

£X.

up

bu

of all

trib

fent

are

the

true

who

idea

obje

as, b

shou.

fame

tion

agree

fame:

Boule

Same !

ledge

these may be opposed or denied as many ways, as the parts of which they are composed may be denied; fo this copulative proposition, Riches and honour are temptations to pride, may be denied by faying, Riches are not temptations, though bonour may be : or, bonour is not a temptation, though riches may be; or neither riches nor bonour are temptations, &c.

So this discretive proposition, Job was patient, though bis grief was great, is denied by faying, Job was not patient, though his grief was great; or, Job was patient, but his grief was not great : or, Job was not patient,

nor was his grief great. not logo on an in it is saw in

We proceed now to the fecond fort of compound porpositions, viz. such rubose composition is not expressed, but latent or concealed, yet a small attention will find two propositions included in them. Such are these that follow:

1. Exclusives; as, The pious man alone is bappy. It is only Sir Ifaac Newton could find out true philosophy.

2. Exceptives, as, None of the ancients but Plate well defended the foul's immortality. The Protestants worship none but God.

3. Comparatives; as, pain is the greatest affliction. No

Turk was fiercer than the Spaniards at Mexico.

Here note, that the comparative degree does not always imply the positive; as if I say, A fool is better than a knave, this does not affirm that folly is good, but that it is a less evil than knavery, and of the anger

4. Inceptives and defitives, which relate to the beginning or ending of of any thing; as, the Latin tongue is not yet forgotten. No man before Orpheus wrote Greek verfe. Peter Czar of Muscovy began to civilize bis nation.

To these may be added continuatives; as, Rome remains to this day, which includes at least two propositions, viz. Rome was, and Rome is the same and ad of

Here let other authors spend time and pains in giving the precise definitions of all these forts of propositions,

which

t

le.

te.

3.

-

OT

g

Si

which may as well be understood by their names and examples: here let them tell what their truth depends upon, and how they are to be opposed and contradicted: but a moderate share of common sense, with a review of what is faid on the former compounds, will fuffice for all these purposes without the formality of rules. and old by it detains

## SECT. VII.

had gein less inter bather ton samplier afect

allacem relaction as a maxitis da li

### Of true and false Propositions.

DRopositions are next to be considered according to their fense or fignification, and thus they are difinbuted into true or false. A true proposition reprefents things as they are in themselves; but if things. are represented otherwise than they are in themselves. the proposition is false.

Or we may describe them more particularly thus; a true proposition joins those ideas and terms together whose objects are joined and agree, or it disjoins those ideas and terms, whose objects disagree or are disjoined;

as. every bird has avings, a brute is not immortal.

A false proposition joins those ideas or terms whose objects disagree. or it disjoins those whose objects agree

as, birds have no wings, brutes are immortal.

Note, It is impossible that the same proposition: hould be both true and falle at the same time, in the same sense, and in the same respect; because a proposition is but the representation of the agreement or difagreement of things: Now, it is impossible that the same thing Should be and not be, or that the same thing bould agree and not agree at the Same time, and in the same respect. This is a first principle of boman knowledge.

Yet some propositions may seem to contradict one another.

d

8

p

tl

ir

t/

to

di

ei

he

th

tr

tr

fe

W

tri

of

th:

di/

cer

pla

fho if c

tha

don

cre

another, though they may be both true, but in different fenses, or respects, or times, as, Man was immortal in Paradise. But the two propositions must be referred to different times; as, man before his fall was immortal, but at the fall he became mortal. So we may say now, man is mortal or man is immortal, if we take these propositions in different respects; as man is an immortal creature as to his soul, but mortal as to his body. A great variety of difficulties and seeming contradictions both in holy scripture and other writings, may be solved and explained in this manner.

The most important question on this subject is this, What is the criterion, or distinguishing mark of truth? How shall we know when a proposition is really true or false? There are so many disguises of truth in the world, so many false appearances of truth, that some sects have declared there is no possibility of distinguishing truth from falshood; and therefore they have abandoned all pretences to knowledge, and maintained street

nuoufly that nothing is to be known.

The first men of this humour made themselves famous in Greece by the name of Scepticks; that is feekers; they were also called Academicks, borrowing their name from Academia, their school or place of study. They taught that all things are uncertain, though they allowed that some are more propable than others. After these arose the sect of Pyrrhonicks, named from Pwrho their mafter, who would not allow on proposition to be more probable than another: but pro fessed that all things were equally uncertain. Now, a thefe men (as an ingenious author expresses it) wer rather to be called a fect of liars than philosophers; and that censure is just for two reasons: (1) Because the determined concerning every proposition that it was to certain, and believed that as a certain truth, while the professed there was nothing certain, and that nothing could be determined concerning truth or fallhood

II.

ent

in

loe

ics;

fall

nor-

ons

ture

1 in

and

his,

th?

e or

the

one

iish-

oan-

Are-

fa

is,

ving

e of tain

than

med

one

bro

, al

wer and

the

sup

the

him

ood

and

and thus their very doctrine gave itself the lie. (2.) Because they judged and acted as other men did in the common affairs of life; they would neither run into fire nor water, though they professed ignorance and uncertainty, whether the one would burn, or the other drown them.

There have been fome in all ages who have too much affected this humour, who dispute against every thing, under pretence that truth has no certain mark to distinguish it. Let us therefore enquire, what is the general criterion of truth? And in order to this, it is proper to consider what is the reason why we assent to those propositions, which contain the most certain and indubitable truths; fuch as thefe, The whole is greater

than a part; two and three make five.

The only reason why we believe these propositions to be true, is because the ideas of the subjects and predicates appear with fo much clearness and strength of evidence to agree to each other, that the mind cannot help discerning the agreement, and cannot doubt of the truth of them, but is constrained to judge them true. So when we compare the ideas of a circle and a triangle, or the ideas of an oister and a butterfly, we fee such an evident disagreement between them, that we are fure that the butterfly is not an oifter; nor is a triangle a circle. There is nothing but the evidence of the agreement or disagreement between two ideas, that makes us affirm or deny the one or the other,

Now, it will follow from hence, that a clear and distinct perception or full evidence of the agreement and disagreement of our ideas to one another, or to things, is a certain criterion of truth; for fince our minds are of such a make, that where the evidence is exceeding plain and strong, we cannot withhold our affent; we shoul I then be necessarily exposed to believe falshood, if complete evidence should be found in any propositions that are not true. But surely the God of perfect wisdom, truth, and goodness would never oblige his creatures to be thus deceived; and therefore he would

the lo served a Quality and to serve at mever

never have constituted us of such a frame as would render it naturally impossible to guard against error.

Another consequence is naturally derived from the former; and that is, that the only reason why we fall into a mistake is, because we are impatient to form a judgment of things before we have a clear and evident perception of their agreement or disagreement; and if we will make haste to judge while our ideas are obscure and confused, or before we see whether they agree or disagree, we shall plunge ourselves into perpetual errors.—See more on this subject in an Essay on the freedom of will in God and man; Published in 1732. §. 1. p. 13. Sold by J. Roberts in Warwick-Lane, and R. Hett, in the Poultry.

Note, What is here afferted concerning the necessity of clear and distinct ideas, refers chiefly to propositions, which we form ourselves by our own powers: as for propositions which we derive from the testimony of others, they will be accounted for in Chap. IV.

### SECT. VIII. bi edito

Of certain and dubious Propositions, of Knowledge and Opinion.

SINCE we have found that evidence is the great criterion and the fure mark of truth; this leads us directly to confider propositions according to their evidence: and here we must take notice both of the different degrees of evidence, and also the different kinds of it.

Propositions according to their different degrees of evidence are distinguished into certain and dubious.\*

Where

\* It may be objected, that this certainty and uncertainty being only in the mind, the division belongs to propositions rather according to the degrees of our assent, than the decrees of ewidence. But

Where the evidence of the agreement or disagreement of the ideas is so strong and plain, that we cannot forbid nor delay our assent, the proposition is called certain; as, every circle bath a centre; the world did not create itself. An assent to such propositions is honored

with the name of knowledge.

But when there is any obscurity upon the agreement or disagreement of the ideas, so that the mind does not clearly perceive it, and is not compelled to assent or dissent, then the proposition, in a proper and philosophical sense is called doubtful or uncertain; as, the planets are inhabited: the souls of brutes are mere matter; the world will not stand a thousand years longer; Dido built the city of Carthage, &c. Such uncertain propositions

are called opinions.

When we consider ourselves as philosophers or search ers of truth, it would be well if we always suspended a sull judgment or determination about any thing, and made farther inquiries, where this plain and perfect evidence is wanting; but we are so prone of ourselves to judge without sull evidence, and in some cases the necessity of action in the affairs of life, constrains us to judge and determine upon a tolerable degree of evidence that we vulgarly call those propositions certain, where we have but very little room or reason to doubt of them, though the evidence be not complete or resistless.

Certainty, according to the schools, is distinguished into objective and subjective. Objective certainty is when the proposition is certainly true in itself; and subjective, when we are certain of the truth of it. The one is in things, the other is in our minds.

O 2 But

it may well be answered, that the evidence here intended is that which appears so to the mind, and not the mere evidence in the neture of things? besides (as we shall shew immediately) the degree of affent ought to be exactly proportionable to the degree of evidence; and therefore the difference is not great, whether propositions be called tertain or uncertain, according to the measure of evidence, or of assent.

But let it be observed, here, that every proposition in itself is certainly true or certainly false. For though doubtfulness or uncertainty seems to be a medium between certain truth and certain falshood in our minds, yet there is no such medium in things themselves, no; not even in such medium in things themselves, no; not even in such events: for now at this time it is certain in itself, that midsummer day seven years bence will be serve, or it is certain it will be cloudy, though we are uncertain and utterly ignorant what sort of day it will be: this certainty of distant suturities is known to God only.

Uncertain or dubious propositions, i. e. opinions, are

distinguished into probable or improbable.

When the evidence of any propolition is greater than the evidence of the contrary, then it is a probable opinion: where the evidence and arguments are stronger on the contrary side, we call it improbable. But while the arguments on either fide feem to be equally strong, and the evidence for and against any proposition appears equal to the mind, then in common language we call it a doubtful matter. We also call it a dubious or doubtful proposition, where there is no arguments on either fide, as next Christmas-day will be a very sharp frost. And in general all these propositions are doubtful, wherein we can perceive no fufficient marks or evidences of truth or falshood. In fuch a case, the mind which is searching for truth ought to remain in a state of doubt or suspence, until Superior evidence on one fide or the other incline the balance of the judgment, and determine the probability or certainty to the one side,

A great many propositions which we generally believe or disbelieve in human affairs, or in the sciences, have very various degrees of evidence, which yet arise not to complete certainty, either of truth or falshood. Thus it comes to pass that there are such various and almost infinite degrees of probability and improbability. To a weak probability we should give a weak assent; and a stronger assent is due where the evidence is greatt

pl

It

lie

al

ea

bu

an

W

to

11

Y

n

r

le

e

e

y

1-

a is

ny fe

10

n

h

il

10

-

1.

d

y.

1-

n

er, and the matter more probable. If we proportion our affent in all things to the degrees of evidence, we do the utmost that human nature is capable of in a rational way to secure itself from error.

io who don't got a chilled male a see the body, of

### to not a boller of SECT. I'IX. Suppose in a benefit offer

we burn what belongs to the such

in a bling surfey to not mit and in the

Of Sense, Consciousness, Intelligence, Reason, Faith, and Inspiration.

FTER we have confidered the evidence of pro-A positions in the various degrees of it, we come to survey the feveral kinds of evidence; or the different ways whereby truth is let into the mind, and which produce accordingly several kinds of knowledge. We shall distribute them into these fix, (viz.) Sense, consciousness, intelligence, reason, faith, and inspiration; and then diffinguish the propositions which are derived: from them.

I. The evidence of fanse is when we frame a propostion according to the dictate of any of our senses; so we judge that grafs is green; that a trumpet gives a pleasant sound; the fire burns wood; water is soft, and tron is bard; for we have seen, heard, or selt all these. It is upon this evidence of fense that we know and believe the daily occurrences in human life; and almost all the histories of mankind that are written by eye or ear-witnesses are built upon this principle.

Under the evidence of sense we do not only include that knowledge which is derived to us by our outward fenses of hearing, seeing, feeling, tasting, and smelling; but that also which is derived from the inward sensations. and appetites of hunger, thirst, cose, pleasure, pain, wearinefs, reft, &c. and all those things which belong; to the body; as, bunger is a gairfur efficie, light is s

Hoffier regress Hilliams Read to discuss on

carry stantistic contact and a correction

Propositions which are built on this evidence, may be named sensible propositions,, or the dictates of sense.

II. As we learn what belongs to the body of the evidence of fense, so we learn what belongs to the soul by an inward consciousness, which may be called a fort of internal feeling, or spiritual sensation of what passes in the mind; as, I think before I speak; I desire large knowledge: Isuspect my own practice; I studied hard today; my conscience bears witness of my sincerity; my soul hates vain thoughts; fear is an uneasy passion; long meditation on one thing is tiresome.

Thus it appears that we obtain the knowledge of a multitude of propositions, as well as of single ideas, by those two principles which Mr Locke calls sensation and reflection: one of them is a fort of consciousness of what affects the body, and the other is a consciousness of what

passes in the mind.

Propositions which are built on this internal consciousness, have yet no particular distinguishing name alsigned to them.

III. Intelligence relates chiefly to those abstracted proposition which carry their own evidence with them, and admit no doubt about them. Our perception of this self-evidence in any proposition is called intelligence. It is our knowledge of those first principles of truth which are (as it were) wrought into the very nature and make of our mind: they are so evident in themfelves to every man who attends to tnem, that they need no proof. It is the prerogative and peculiar excellence of these propositiona, that they can scarce ever be proved or denied: they cannot eafily be proved, because there is nothing supposed to be more clear, or certain, from which an argument may be drawn to prove them. They cannot well be denied, because their own evidence is so bright and convincing, that as soon as the terms are understood the mind necessarily assents; such are these, whatsoever acteth hath a being; nothing has no properties;

II.

ay

11-

by

of

0-

ul

e-

a

JY.

id

at

at

1

4

properties; a part is less that the whole; nothing can be

the cause of itself.

These propositions are called axioms or maxims, or first principles; these are the very foundations of all improved knowledge and reasonings; and, on this account, these have been thought to be innate propositions, or truths born with us.

Some suppose that a great part of the knowledge of argels and human souls, in the separate state, is obtained in this manner, viz. by such an immediate view of things in their own nature, which is called intuition.

IV. Reasoning is the next fort of evidence, and that is when one truth is inferred or drawn from others by natural and just methods of argument; as, if there be much light at midnight, I infer, it proceeds from the moon, because the sun is under the earth.\*

If I see a cottage in a forest, I conclude, some man has been there and built it. Or when I survey the heavens and earth, this gives evidence to my reason, that

there is a God who made them.

The propositions which I believe upon this kind of evidence, are called conclusions, or rational truths, and the knowledge that we gain this way is properly called

fcience.

Yet let it be noted, that the word science is usually applied to a whole body of regular or methodical observations or propositions which learned men have formed concerning any subject of speculation, deriving one truth from another by a train of arguments. If this knowledge chiefly directs our practice, it is usually called an art. And this is the most remarkable distinction between an art and a science, (viz.) the one refers chiefly to practice, the other to speculation. Natural philosophy, or physick, and ontology, are sciences: Logick and rhetorick are called arts; but Mathematicks include

<sup>\*</sup> Note, Since this book was written we have fo many appearances of the aurora borealis, as reduces this inference only to an probability.

bi

at

th

en

(e

bi

k

10

d

ir

b

b

included both art and science; for they have much of

speculation, and much of practice in them.

Olserve here, that when the evidence of a propofition derived from sense, consciousness, intelligence, or reason, is firm and indubitable, produces such an assent as we call a natural certainty.

V. When we derive the evidence of any proposition from the testimony of others, it is called the evidence of saith; and this is a large part of our knowledge. Ten thousand things there are which we believe merely upon the authority or credit of those who have spoken or written of them. It is by this evidence that we know there is such a country as China, and there was such a man as Cicero who dwelt in Rome. It is by this that most of the transactions in human life are managed: we know our parents and our kindred by this means; we know the persons and laws of our present governors, as well as things that are at a vast distance from us in foreign nations, or in ancient ages.

According as the persons that inform us of anything, are many or sew, or more or less wise, and faithful, and credible; so our faith is more or less firm or wavering; and the proposition believed is either certain or doubtful: but in matters of faith, an exceeding

great probability, is called a moral certainty.

Faith is generally distinguished into divine and human, not with regard to the propositions that are believed, but with regard to the testimony upon which we believe them. When God reveals any thing to us, this gives us the evidence of divine faith; but what man only acquaints us with, produces a human saith in us: the one being built upon the word of man, arises but to moral certainty; but the other being sounded on the word of God, arises to an absolute and infallible assurance, so far as we understand the meaning of this word. This is called supernatural certainty.

Propositions which we believe upon the evidence of human tellimony, are celled narratives, relations, in-

10

ıt

n

ports, historical observations, &c.; but such as are built on divine testimony, are termed matters of revelation; and if they are of great importance in religion,

they are called articles of faith.

There are some propositions or parts of knowledge, which are said to be derived from observation and experience; that is, experience in ourselves, and the observation we have made on other persons or things; but these are made up of some of the former springs of knowledge joined together (viz.) Sense, consciousness, reason, faith, &c. and therefore are not reckoned a distinct kind of evidence.

VI. Inspiration is a fort of evidence distinct from all the former, and that is when such an overpowering impression of any proposition is made upon the mind by God himself, that gives a convincing and indubitable evidence of the truth and divinity of it: so were

the prophets and apostles inspired.\*

Sometimes God may have been pleased to make use of the outward senses, or the inward working of the imagination, or dreams, apparitions, visions, and voices, or reasoning, or perhaps human narration, to convey divine truths to the mind of the prophet; but none of these would be sufficient to deserve the name of inspiration, without a superior or divine light and power at-

tending them.

This fort of evidence is also very distinct from what we usually call divine faith; for every common christian exercises divide faith, when he believes any proposition which God has revealed in the bible upon this account, because God has said it, though it was by a train of reasonings that he was lead to believe that this is the word of God; whereas in the case of inspiration, the prophet not only exercises divine faith, in believing what God reveals, but he is under a superior heavenly impression, light, and evidence, whereby he is assured that God reveals it. This is the most eminent kind of supernatural certainty.

Though

wh

pred eac

efta

mai

bec

foly

pre

and

&c.

acc

fies

had

ing

any

the

but

the

Wa

den

wa per

by

pol

it,

we

the

pol or

fan

obl

ful

Though persons might be affured of their own inspiration, by some peculiar and inexpressible consciousness of this divine inspiration and evidence in their own spirits, yet it is hard to make out this inspiration to others, and to convince them of it, except by some antecedent or consequent prophecies or miracles, or some public

appearances more than human.

The propositions which are attained by this fort of evidence are called inspired truths. This is divine revelation at first hand, and the dictates of God in an immediate manner, of which theological writers discourse at large; but since it belongs only to a few favorites of heaven to be inspired, and not the bulk of mankind, it is not necessary to speak more of it in a treatise of Logick, which is designed for the general improvement of human reason.

The various kinds of evidence, upon which we believe any proposition, afford us these three remarks.

I. Remark. The same proposition may be known to us by different kinds of evidence: that the whole is bigger than a part is known by our senses, and it is known by the self-evidence of the thing to our mind. That God created the heavens and the earth, is known to us by reason, and is known also by divine testimon or faith.

Il. Remark. Among these various kinds of evidence, some aregenerally stronger than others in their own nature, and give a better ground for certainty. Inward consciousness and intelligence, as well as divine saith and inspiration, usually carry much more force with them than sense or human saith, which are often saith, sense, and reasoning lay a soundation also for complete assurance, and leave no room for doubt.

Reason in its own nature would always lead us into the truth in matters within its compass, if it were used aright; or it would require us to suspend our judgment where

risatight to brist the big of the highest will be all the

t II.

of of

rits,

iers,

dent

ıblic

t of

Te-

1 an

dif-

fa-

of

n a

era

be-

rto

is

is

ıd.

wn

my

e,

n

n-

ne

ce

18

0

d

C

where there is want of evidence. But it is our floth, precipitancy, sense, passion, and many other things that lead our reason astray in this degenerate and impersect estate: hence it comes to pass that we are guilty of so many errors in reasoning, especially about divine things, because our reason either is busy to enquire, and resolved to determine about matters that are above our present reach; or because we mingle many prejudices and secret influences of sense, sancy, passion, inclination, &c. with our exercises of reason, and judge and determine according to these irregular influences.

Divine faith would never admit of any controverfies or doubtings, if we were but assured that God had spoken, and that we rightly understood his mean-

ing.

III. Remark. The greatest evidence and certainty of any proposition does not depend upon the variety of the ways or kinds of evidence, whereby it is known, but rather upon the strength or degree of evidence, and the clearness of that light in or by which it appears to the mind. For a proposition that is known only one way may be much more certain, and have stronger evidence than another that is supposed to be known many ways. Therefore these propositions, nothing has no properties, nothing can make itself, which are known only by intelligence, are much furer and truer than this propolition, the rainbow has real and inherent colours in it, or than this, the fun rolls round the earth; though we feem to know both thefe last by our fenses, and by the common testimony of our neighbours. So, any proposition that is clearly evident to our own Consciousness or divine faith, is much more certain to us then a thoufand others that have only the evidence of feeble and obscure sensations, of more probable reasonings and doubtful argnments, or the witness of fallible men, or even though all these should join together.

(AAH) fore to loune injury done to lim. But when we

American is won of evidence. Son it is one, list,

The second the proposition of the second of the second to

h

fi

d

use

## CHAPP III.

The Springs of faife Judgment, or the Dostrine of Prejudices.

### -19 vortice of INTRODUCTION.

In the end of the foregoing chapter we have surveyed the several forts of evidence, on which we build our assent to propositions. These are indeed the general grounds upon which we form our judgments concerning things. What remains in this fecond part of Logick is to point out the several springs and causes of our missakes in judging, and to lay down some rules by which we should conduct ourselves in passing a judg-

ment of every thing that is proposed to us.

I confess many things which will be mentioned in these following chapters might be as well reserved to the third part of Logick, where we shall treat of reasoning and argument; for most of our false judgments seem to include a secret bad reasoning in them; and while we shew the springs of error, and the rules of true judgment; do at the same time discover which arguments are sallacious, which reasonings are weak, and which are just and strong. Yet since this is usually called a judging ill, or judging well, I thing we may without any impropriety treat of it here; and this will lay a surer foundation of all sorts of ratiocination and argument.

Rash judgments are called prejudices, and so are the springs of them. This word in common life signifies an ill opinion which we have conceived of some other person, or some injury done to him. But when we

of

ld

e-

n-

of

in

ne

19

to

re

t;

]-

7-1y

re

use the word in matters of science, it signifies a judgment that is formed concerning any person or thing before sufficient examination; and generally we suppose it to mean a false judgment or mistake: at least, it is an opinion taken up without solid reason for it, or an assent given to a proposition before we have just evidence of the truth of it, though the thing itself may happen to be true.

Sometimes these rash judgments are called preposses, whereby is meant, that some particular opinion has possessed the mind, and engaged the assent without

fufficient fearch or evidence of the truth of it.

There is a vast variety of these prejudices and prepossessions which attend mankind in every age and condition of life: they lay the foundation of many an error, and many an unhappy practice, both in affairs
of religion, and in our civil concernments; as well
as in matters of learning. It is necessary for a man
who pursues truth to enquire into these springs of error,
that as far as possible he may rid himself of old prejudices, and watch hourly against new ones.

The number of them is so great, and they are interwoven with each other, as well as with the powers of human nature, that it is sometimes hard to distinguish them apart; yet for method's sake we shall reduce them to these four general heads, viz. Prejudices arising from things, or from words, from ourselves, or from other persons; and after the description of each prejudice, we shall propose one or more ways of cur-

ing it.

par

our.

dar ang

gen

uni

mu

kin

rath

at t

con

by

by

a∫i per

vid

fpr

thi

fro

fud

tur

the

as

adı

So

lic

all

fro

VO

lar

1

#### SECT. I.

### Prejudices arising from Things.

from the things themselves about which we judge But here let it be observed, that there is nothing in the nature of things that will necessarily lead us into erro if we do but use our reason aright, and with-hold ou judgment till there appear sufficient evidence of truth But since we are so unhappily prone to take advantage of every doubtful appearance and circumstance of things to form a wrong judgment, and plunge our selves into mistake, therefore it is proper to consider what there is in the things themselves that may on casion our errors.

I. The obscurity of some truths, and the difficulty fearthing them out, is one occasion of rash and mistake

judgment.

Some truths are difficult because they lie remote from the first principles of knowledge, and want long chain of argument to come at them: such a many of the deep things of algebra and geometry, at some of the theorems and problems of most parts the mathematicks. Many things in natural philosopher are dark and intricate upon this account, because we cannot come at any certain knowledge of them, with out the labour of many and difficult, as well to chargeable experiments.

There are other truths which have great darky upon them, because we have no proper means or mediums to come at the knowledge of them. Thought our age we have found out many of the deep things nature. by the assistance of glasses and other instruments; yet we are not hitherto arrived at any in

ficien

h arif

judge

in the

erro

d ou

truth

ntag

ce a

our nfide

7 00

lty o

ake

nt

scient methods to discover the shape of those little particles of matter which diffinguish the various fapours, odours, and colours of bodies; nor to find what fort of atoms compose liquids or folids, and diftinguish wood, minerals, metals, gloss, flone, &c. There is a darkness also lies upon the actions of the intellectual or angelical world; their manners of subsistence and agency, the power of spirits to move bodies, and the union of our fouls with this animal body of ours, are much unknown to us on this account.

Now, in many of these cases, a great part of mankind are not content to be entirely ignorant; but they rather chuse to form rash and hasty judgments, to guess at things without just evidence, to believe formething concerning them before they can know them, and there-

by they fall into error.

This fort of prejudice, as well as most others, is cured by patience and diligence in enquiry and reasoning, and a suspension of judgment, till we have attained some proper mediums of knowledge, and till we see sufficient e-

vidence of the truth.

II. The appearance of things in a disguise, is another spring of prejudice or rash judgment. The outside of things which first strikes us, is oftentimes different from the inward nature, and we are tempted to judge fuddenly according to outward appearance. If a picture is daubed with many bright and glaring colours, the vulgar eye admires it as an excellent piece; whereas the same person judges very contemptuously of some admirable defign sketched out only with a black pencil on a coarse paper, though by the hand of Raphael. So the scholar spies the name of a new book in a pub. lic newspaper; he is charmed with the title, he purchases, he reads with huge expectations, and finds it all trash and impertinence: this is a prejudice derived from the appearance: we are too ready to judge that volume valuable which had so good a frontispiece. The large heap of encomiums and swelling words of affu-P 2

his

loo fen

wh

adı

alfo

for the

H

and It

fay

an

rei

ca

co

an

T

ar fe

fo an

ha

bu

m

tı

ra

rance that are bestowed on quack medicines in public advertisements, tempt many a reader to judge them infallible, and to use the pills, or the plaister, with vast

hope, and frequent disappointment.

We are tempted to form our judgment of persons as well as things by these outward appearances. Where there is wealth, equipage, and splendor we are ready to call that man happy; but we see not the vexing difquietudes of his foul: and when we fpy a person in ragged garments, we form a despicable opinion of him too suddenly, we can hardly think him either bappy or svife, our judgment is so strangely biassed by outward and sensible things, It was through the power of this prejudice that the Yews rejected our bleffed Saviour: they could not fuffer themselves to believe that the Man who appeared as the Son of a Carpenter was also the Son of God. And because St. Paul was of a little flature, a mean presence, and his voice contemptible. fome of the Corinthians were tempted to doubt whether he was inspired or no.

This prejudice is cured by a longer acquaintance with the world and a just observation that things are sometimes better and sometimes worse than they appear to be. We ought therefore to restrain our excessive forwardness to form our opinion of persons or things before we have opportunity to search into them more persectly. Remember that a grey beard does not make a philosopher; all is not gold that glisters; and a rough diamond

may be worth an immense sum.

III. A mixture of different qualities in the same thing, is another temptation to judge amis. We are ready to be carried away by that quality which strikes the first or the strongest impressions upon us, and we judge of the whole object according to that quality, regardless of all the rest; or sometimes we colour overall the other qualities with that one tincture, whether it be bad or good.

When we have just reason to admire a man for his virtues, we are sometimes inclined not only to neglect his

his weaknesses, but even to put a good colour upon them, and to think them amiable. When we read a look that has many excellent truths in it, and divine sentiments, we are tempted to approve not only that whole book, but even all the writings of that author. When a poet, an orator, or a painter, has performed admirably in several illustrious pieces, we sometimes also admire his very errors: we mistake his blunders for beauties, and are so ignorantly fond as to copy after them.

It is this prejudice that has rendered so many great scholars perfect bigots, and inclined them to defend Homer or Horace, Livy or Cicero, in all their mistakes, and vindicate all the sollies of their favorite author. It is this that tempts some great writers to support the sayings of almost all the ancient fathers of the churchy

and admire them in their very reveries.

On the other hand, if an author has professed heretical sentiments in religion, we throw our scorn upon upon every thing he writes, we despise even his critical or mathematical searning, and will hardly allow him common sense. If a poem has some blemishes in it, there are a fort of salse critics who decry it universally.

and will allow no beauties there.

This fort of prejudice is relieved by learning to dif tinguish things well, and not to judge in the lump. There is scarce any thing in the world of nature or art, in the world of morality or religion, that is perfeetly uniform. There is a mixture of wisdom and folly, vice and virtue, good and evil, both in men and things. We should remember that some persons have great wit and little judgment; others are judicious but not witty. Some are good-humoured without compliment; others have all the formalities of complaifance but no good humour. We ought to know that one man may be vicious and learned, while another has virtue without learning. That many a man thinks admirably well who has a poor utterance; while others have a charming manner of speech, but their thoughts are trifling

trifling and impertinent. Some are good neighbours, and courteous and charitable toward men who have no piety toward God; others are truly religious, but of morose natural tempers. Some excellent sayings are found in very filly books, and some filly thoughts appear in books of value. We should neither praise non distraise by wholesale, but separate the good from the evil, and judge of them apart; the accuracy of a good judgment consists much in making such distinctions.

Yet let it be noted too, that in common discourse we usually denominate persons and things according to the major part of their character. He is to be called a wife man who has but sew sollies: he is a good philosopher who knows much of nature, and for the most part reasons well in matters of human science; and that book should be esteemed well written, which has much more of good sense in it than it has of imperti-

nence.

IV. Though a thing be uniform in its own nature, yet the different lights in which it may be placed, and the different views in which it appears to us, will be ready to excite in us mistaken judgments concerning it. Let an erect cone be placed in a horizontal plane, at a great distance from the eye, and it appears a plain triangle; but we shall judge that very cone to be nothing but a flat circle, if its base be obverted towards us. Set a common round plate a little obliquely before our eyes afar off, and we shall think it an oval figure; but if the very edge of it be turned towards us, we shall take it for a Arait line. So when we view the several folds of changeable filk, we pronounce this part red, and that yellow, because of its different position to the light, though the filk laid smooth in one light appears all of one colour.

When we survey the miseries of mankind, and think of the sorrows of millions, both on earth and in hell, the Divine Government has a terrible aspect; and we may be tempted to think hardly even of God himself.

But.

But if we view the profusion of his bounty and grace amongst his creatures on earth, or the happy spirits in heaven, we shall have so exalted an idea of kis goodness as to forget his vengeance. Some men dwell entirely upon the promises of his gospel, and think him all mercy: others under a melancholy frame, dwell upon his terrois and his threatenings, and are overwhelmed with the thought of severity and vengeance, as though there'

were no mercy in him.

The true method of delivering ourselves from this prejudice, is to view a thing on all fides, to compare all the various appearances of the fame thing with one another, and let each of them have its full weight in the balance of our judgment, before we fully determine our opinion. It was by this means that the modern astronomers came to find out that the Planet Saturn hath a flat broad circle round its globe, which is called its ring, by observing the different appearances as a narrow or a broader oval, or as it fometimes feems to be a frait line, in the different parts of its twentynine years revolution through the ecliptic. And if we take the same just and religious survey of the great and bleffed God in all the discoveries of his vengeance and his mercy, we shall at last conclude him to be bothjust and good.

V. The cosual affociation of many of our ideas becomes the spring of another prejudice or rash judgment, to which we are sometimes exposed. If in our younger years we have taken medicines that have been nauseous, when any medicine whatfoever is afterward proposed to us under fickness, we immediately judge it nauseous: our fancy has so closely joined these ideas together that we know not how to separate them: then the stomach feels the difgust, and perhaps refuses the only drug that can preserve life. So a child who has been let blood joins the ideas of pain and the surgeon together; that he hates the fight of the furgeon, because he thinks of his pain: or if he has drank a bitter potion, he conceives.

for

an

hu

an

di

m

ga

ar

conceives a bitter idea of the cup which held it, and

will drink nothing out of that cup.

It is for the same reason that the bulk of the common people are so superstitiously fond of the Pfalms translated by Hopkins and Sternhold, and think them sacred and divine, because they have been now for more than an hundred years bound up in the same covers with our bibles.

The best relief against this prejudice of association, is to consider, whether there be any natural and necessary connexion between those ideas which fancy, custom, or chance hath thus joined together: and if nature has not joined them, let our judgment correct the folly of our imagination, and separate those ideas again.

#### SECT. II.

### Prejudice arising from words.

UR ideas and words are so linked together, that while we judge of things according to words, we are led into several mistakes. These may be distributed under two general heads, viz. such as arise from single words or phrases, or such as arise from words joined in speech, and composing a discourse.

I. The most eminent and remarkable error of the first kind are these three. (1.) When our words are insignificant, and have no ideas; as when the mystical divines talk of the prayer of silence, the supernatural and passive night of the soul, the vacuity of powers, the supernsion of all thoughts: or, (2.) When our words are equivocal, and signify two or more ideas, as the words law, light, sless, spirit, righteousness, and many other terms in scripture: or, (3.) When two or three words

are fynonymous, and fignify one idea, as regeneration, and new creation in the new testament; both which mean only a change of the heart from sin to holines; or as the Elector of Cologn and the Bishop of Cologn are two titles of the same man.

These kind of phrases are the occasion of various mistakes; but none so unhappy as those in theology: for both words without ideas, as well as synonymous and equivocal words, bave been used and abused by the humours, passions, interests, or by the real ignorance and weakness of men, to beget terrible contests among Christians.

But to relieve us under all those dangers, and to remove these forts of prejudices which arise from single words or phrases, I must remit the reader to Part I. Chap. 4. where I have treated about words: and to those directions which I have given concerning the definition of the names, Part I. Chap. 6. Sect. 3.

II. There is another fort of false judgments or mistakes which we are exposed to by words; and that is, when they are joined in speech, and compose a discourse: and here we are in danger two ways.

The one is when a man writes good sense, or speaks much to the purpose, but has not a happy or engaging manner of expression. Perhaps he uses coarse and vulgar words, or old, obsolete, and unsashionable language, or terms and phrases that are foreign, latinezed, scholastic, very uncommon, and hard to be understood: and this is still worse, if his sentences are long and intricate, or the sound of them harsh and grating to the ear. All these indeed are defects in style,, and lead some nice and unthinking hearers or readers into an ill opinion of all that such a person speaks or writes. Many an excellent discourse of our foresathers has had abundance of contempt cast upon it by our modern pretenders to sense, for want of their distinguishing between the language and the ideas.

On the other hand, when a man of eloquence speaks

or writes upon any subject, we are too ready to run into his fentiments, being fweetly and infenfibly drawn by the smoothness of his harangue, and the pathetic power of his language. Rhetorick will varnish every error so that it shall appear in the dress of truth, and put such ornaments upon vice as to make it look like virtue: it is an art of wondrous and extensive influence; it often conceals, obscures, or overwhelms the truth, and places fometimes a gross falshood in a most alluring light. The decency of action, the music of the voice. the harmony of the periods, the beauty of the flyle, and all the engaging airs of the speaker, have often charmed the hearers into error, and perfuaded them to approve whatfoever is proposed in so agreeable a manner. A large affembly stands exposed at once to the power of these prejudices, and imbibes them all. So Cicero and Demosthenes made the Romans and the Athenians believe almost whatsoever they pleased.

The best defence against both of these dangers, is to learn the skill (as much as possible) of separating our thoughts and ideas from words and phrases; to judge of the things in their own natures, and in their natural or just relation to another, abstracted from the use of language; and to maintain a steady and obstinate resolution, to hearken to nothing but truth, in whatsoever

style or dress it appears.

Then we shall hear a sermon of pious and just sentiments with esteem and reverence, though the preacher has but an unpolished style, and many defects in the manner of his delivery. Then we shall neglect and disregard all the flattering infinuations whereby the orator would make way for his own sentiments to take possession of our souls, if he has not solid and instructive sense equal to his language. Oratory is a happy talent when it is rightly employed to excite the passions to the practice of virtue and piety; but, to speak properly, this art has nothing to do in the search after truth.

## SECT. III.

## Prejudices arising from ourselves.

Either words nor things would for often lead us aftray from truth, if we had not within our-felves such springs of error as these that follow.

I. Many errors are derived from our weakness of reason, and incapacity to judge of things in our infant state. These are called the prejudices of infancy. We frame early mistakes about the common objects which surround us, and the common affairs of life: we fancy the nurse is our best friend, because children receive from their nurses their food and other conveniences of life. We judge that books are very unpleasant things, because perhaps we have been driven to them by the scourge. We judge also that the sky touches the distant hills, because we cannot inform ourselves better in childhood. We believe the stars are not risen till the sun is set, because we never see them by day. But some of these errors may seem to be derived from the next spring.

The way to cure the prejudices of infancy is to distinguish, as far as we can, which are those opinions which we framed in perfect childhood; to remember that at that time our reason was incapable of forming a right judgment; and to bring these propositions again

to be examined at the bar of mature reason.

II. Our senses give us many a false information of things, and tempt us to judge amis. This is called the prejudice of sense, as when we suppose the sun and moon to be flat bodies, and to be but a few inches broad, because they appear so to the eye. Sense inclines us

ing

for

fen

101

fp

m

th

liv

ju

V2

W

m

fe

W

fa

at

W

ol

P

th

th

fp

n

to judge that air has no weight, because we do not feel it press heavy upon us; and we judge also by our senses, that cold and heat, sweet and sour, red and blue, &c. are such real properties in the objects themselves, and exactly like those sensations which they excite in us.

Note, Those mistakes of this fort which all mankind drop and lose, in their advancing age, are called mere prejudices of infancy; but those which abide with the vulgar part of the world, and generally with all men, till learning and philosophy cure them, more properly

attain the name of prejudices of fense.

These prejudices are to be removed several ways. (1.) By the affiftance of one sense we cure the mistakes of another, as when a flick thrust into the water seems crooked, we are prevented from judging it to be really fo in itself; for when we take it out of the water, both our fight and our feeling agree and determine it to be strait. (2.) The exercise of our reason, and an applieation to mathematical and philosophical studies, cures many other prejudices of sense, both with relation to the heavenly and earthly bodies. (3) We should remember that our fenses have often deceived us in various instances; that they give but a confused and imperfect representation of things in many cases; that they often represent falfly those very objects to which they feem to be suited, such as the shape, motion, size and situation of gross bodies, if they are but placed at a distance from us; and as for the minute particles of which bodies are composed, our senses cannot distinguish them. (4.) We should remember also, that one prime and original defign of our fenses, is to inform us what various relations the bodies that are round about us bear to our own animal body, and to give us notice what is pleasant and useful, or what is painful and injurious to us; but they are not sufficient of themselves to lead us into a philosophical acquaintance with the inward nature of things. It must be confessed it is by the affistance of the eye and the ear especially, (which are called

called the fenfe: of discipline) that our minds are furnish. ed with various parts of knowledge, by reading, hearing, and observing things divine and human; yet reafon ought always to accompany the exercise of our senses, whenever we would form a just judgment of

things proposed to our enquiry.

II,

ot

ur

nd

n-

X-

nd

re

ne

n,

es

ns

y

h

e

Here it is proper to observe also, that as the weakness of reason in our infancy, and the dictates of our senses fometimes in advancing years, lead the wifer part of mankind aftray from truth; fo the meaner parts of our species, persons whose genius is very low, whose judgment is always weak, who are ever indulging the distates of sense and bumour, are but children of a larger size, they fland exposed to everlasting mistakes in life, and

live and die in the midst of prejudices.

III. Imagination is another fruitful spring of false judgments. Our imagination is nothing el but the various appearances of our fensible ideas in the brain. where the foul frequently works in uniting, disjoining, multiplying, magnifying, diminishing, and altering the feveral fhapes, colours, founds, motions, words, and things that have been communicated to us by the outward organs of fense. It is no wonder, therefore, if fancy leads us into many mistakes; for it is but sense at second-hand. Whatever is strongly impressed upon the imagination some persons believe to be true. Some will choose a particular number in a lottery, or lay a large wager on a fingle chance of a dye, and doubt not of success, because their fancy feels so powerful an impression, and assures them it will be prosperous. A thousand pretended prophecies and inspirations, and all the freaks of enthusialm have been derived from this spring. Dreams are nothing else but the deceptions of fancy: A delirium is but a short wildness of the imagination; and a fettled irregularity of fancy is distraction and madness.

One way to gain a victory over this unruly faculty. is to fet a watch upon it perpetually, and to bridle it in all its extravagances; never to believe any thing mere-

ti

I

a

C

tı

to

21

t/

u

m

C

fp

Va

bi

th

0

fh

in

ly because fancy dictates it, any more than I would believe a midnight-dream, nor to trust fancy any farther than it is attended with fewere reason. It is a very useful and entertaining power of human nature in matters of illustration, persuasion; oratory, poesy, wit, conversion, &c. but in the calm enquiry after truth and sinal judgment of things, fancy should retire and stand aside, unless it be called in to explain or illustrate a difficult point by a similitude.

Another method of deliverance from these prejudices of fancy, is to compare the ideas that arise in our imaginations with the real nature of things, as often as we have occasion to judge concerning them; and let calm and sedate reason govern and determine our opinions, though fancy should shew never so great a reluctance. Fancy is the inferior faculty, and it ought to obey.

IV. The various passions or affections of the mind, are numerous and endless springs of prejudice. They disguise every object they converse with, and put their own colours upon it, and thus lead the judgment aftray from truth. It is love that makes the mother think her own child the fairest, and will sometimes persuade us that a blemish is a beauty. Hope and desire make an hour of delay feem as long as two or three hours; hope inclines us to think there is nothing too difficult to be attempted; despair tells us that a brave attempt is mere rashness, and that every difficulty is insurmountable. Fear makes us imagine that a bush shaken with the wind has some savage beast in it, and multiplies the dangers that attend our path: but still there is a more unhappy effect of fear when it keeps millions of fouls in flavery to the errors of an effablished religion: What could persuade the wise men and philosophers of a Popish country to believe the groffest absurdates of the Roman church, but the fear of torture or death, the galleys or the inquisition? Sorrow and melancholy tempt us to think our circumstances much more dismal than they are, that we may

t-

1-

i-

d

es

7-

re

m

ir

y

le

t

-

d

11

.

may have some excuse for mourning: and envy represents the condition of our neighbour better than it is, that there might be some pretence for her own vexation and uneasiness. Anger, wrath, and revenge, and all those hateful passions excite in us far worse ideas of men than they deserve, and persuade us to believe all that is ill of them. A detail of the evil influence of the affections of the mind upon our judgment would make a

large volume.

The cure of these prejudices is attained by a constant jealousy of ourselves, and watchfulness over our passions, that they may never interpose when we are called to pass a judgment of any thing: and when our affections are warmly engaged, let us abstain from judging. It would be also of great use to us to form our deliberate judgments of persons and things in the calmest and serenest hours of life, when the passions of nature are all silent, and the mind enjoys its most persect composure: and these judgments so formed should be treasured up in the mind, that we might have recourse to them in hours of need. See many more sentiments and directions relating to this subject in my doctrine of the passions; Second edition enlarged.

V. The fondness we have for SELF, and the relations which other persons and things have to ourselves, furnish us with another long rank of prejudices. This indeed might be reduced to the passion of self-love, but it is so copious an head that I chose to name it as a distinct spring of false judgments. We are generally ready to fancy every thing of our own has fomething peculiarly valuable in it, when indeed there is no other reason, but because it is our own. Were we born among the gardens of Italy, the rocks of Switzerland, or the ice and snows of Russia and Sweden, still we should imagine peculiar excellencies in our native land. We conceive a good idea of the town and village where we first breathed, and think the better of a man for being born near us. We entertain the best opinion of the perfons Q 2

1

tl

th

ri

b

0

fu

fh

tu

n

th

CC

th

uit

fir

co

0

th

leg

of

ho

to

te ch

persons of our own party; and easily believe evil reports of persons of a different sect or faction. Our own fex, our kindred, our houses, and our very names, feem to have fomething good and defirable in them. We are ready to mingle all these with ourselves, and cannot

bear to have others think meanly of them.

So good an opinion we have of our own fentiments and practices, that it is very difficult to believe what a reprover fays of our conduct; and we are as ready to affent to all the language of flattery. We fet up our own opinions in religion and philosophy as the tests of orthodoxy and truth; and we are prone to judge every practice of other men either a duty or a crime, which we think would be a crime or a duty in us, though their circumstances are vastly different from our own. This humour prevails formetimes to fuch a degree, that we would make our own taste and inclination the standard by which to judge of every dish of meat that is set upon the table, every book in a library, every employment, study, and business of life, as well as every recreation.

It is from this evil principle of fetting up Self for a model what other men ought to be, that the antichristian spirit of imposition and persecution had its original; tho' there is no more reason for it than there was for the practice of that tyrant, who having a bed fit for his own fize was reported to stretch men of low stature upon the rack, till they were drawn out to the length of his bed and fome add also, that he cut off the legs

of any whom he found too long for it.

It is also from a principle near akin to this that we pervertand strain the writings of any venerable authors, and especially the sacred books of scripture to make them speak our own sense. Through the influence which our own schemes or hypothesis have upon the mind, we fometimes become so sharp-sighted as to find these schemes in those places of scripture where the holy writers never thought of them, nor the holy Spirit intended them. At other times this prejudice brings

0

ts

11

of

Y

h

ir

n.

at

1-

et

1-

ry

a

n

0

ne

is

re

th

gs

ve

ke

ce

he

nd

he

i-

gs

ch

fuch a dimness upon the fight that we cannot read any thing that opposes our own scheme, though it be written as with sun-beams, and in the plainest language; and perhaps we are in danger in such a case of winking

a little against the light.

We ought to bring our minds free, unbiassed, and teachable to learn our religion from the word of God; but we have generally formed all the lesser, as well as the greater points of our religion before hand; and then we read the Prophets and Apostles only to pervert them to confirm our own opinions. Were it not for this influence of self, and a bigotry to our own tenets, we could hardly imagine that so many strange, absurd, inconsistent, wicked, mischievous, and bloody principles should pretend to support and defend themselves by

the gospel of Christ.

Every learned Critick has his own hypothesis; and if the common text be not favourable to his opinion, a various lection shall be made authentick. The next must be supposed to be defective or redundant; and the sense of it shall be literal or metaphorical, according as it best Whole chapters or books supports his own scheme. shall be added or left out of the facred canon, or be turned into parables by this influence. Luther knew not well how to reconcile the epiftle of St. James to the doctrine of justification by faith alone; and so he could not allow it to be divine. The papifts bring all the Apocrypha into their bible, and stamp divinity upon pt; for they can fancy purgatory is there, and they find prayers for the dead. But they leave out the second commandment, because it forbids the worship of images. Others suppose the Mosaick history of the creation and the fall of man to be oriental ornaments, or a mere allegory, because the literal sense of those three chapters of Genesis do not agree with their theories. Even an honest plain hearted and unbearned Christian is ready to find fomething in every chapter of the bible to countenance his own private fentiments; but he loves those chapters best which speak his own opinions plainest

th

this is a prejudice that sticks very close to our natures: the scholar is infested with it daily, and the mechanick is not free.

Self has yet a farther and a pernicious influence upon our understandings, and is an unhappy guide in the search after truth. When our own inclination or our ease, our honour, or our profit tempts us to the practice of any thing of suspected lawfulness, how do we strain our thoughts to find arguments for it, and persuade ourselves it is lawful? We colour our iniquity and finful compliance with the names of virtue and innocence, or at least of constraint and necessity. All the different and opposite sentiments and practices of mankind are too much influenced by this mean bribery, and give too just occasion for satyrical writers to say that self-interest governs all mankind.

When the judge had awarded the damages to a perfon into some field a neighbour's oxen had broke, it is reported that he reversed his own sentence, when he heard that the oxen which had done this mischief were bis own. Whether this be a history or a parable, it is still a just representation of the wretched influence of

lelf to corrupt the judgment.

One way to amend this prejudice is to thrust self so far out of the question that it may have no manne of influence whensoever they are called to judge and consider of the naked nature, truth, and justice of things, in matters of equity between man and man, our Saviour has taught us an effectual means of guarding against this prejudice, and that is to put my neighbour in the place of myself, and myself in the place of my neighbour, rather than to be bribed by this corrupt principle of self-love to do injury to our neighbours. Thence arises that golden rule of dealing with others as we would have others deal with us.

In the judgment of truth and falshood, right and wrong, good and evil, we ought to consider that every man has a SELF as well as we; and that the tastes, passions, inclinations, and interests of different men are very different

fall the gree

dif

col

ent felf

occ then ( per, cont

for new who into fo n he i

ano affu thro ther con

for he g from strendiffe him

it.
ver/
they
foev

true

different and often contrary, and that they dictate contrary things: unless therefore all manner of different and contrary propositions could be true at once, self can never be a just test or standard of truth and salfood, good and evil.

VI. The tempers, humours, and peculiar terms of the mind, whether they be natural or acquired, have a great influence upon our judgment, and become the occasion of many mistakes. Let us survey a few of them.

(1) Some persons are of an easy and credulous temter, while others are perpetually discovering a spirit of

contradiction.

The credulous man is ready to receive every thing for truth, that hath but a shadow of evidence; every new book that he reads, and every ingenious man with whom he converses, has power enough to draw him into the sentiments of the speaker or writer. He has so much complaisance in him, or weakness of soul, that he is ready to resign his own opinion to the first objection which he hears, and to receive any sentiments of another that are asserted with a positive air and much assurance. Thus he is under a kind of necessity through the indulgence of this credulous humour, either to be often changing his opinions, or to believe inconsistencies.

The man of contradiction is of a contrary humour, for he stands ready to oppose every thing that is said: he gives a slight attention to the reasons of other men, from an inward scornful presumption that they have no strength in them. When he reads or hears a discourse different from his own sentiments, he does not give himself leave to consider whether that discourse may be true; but employs all his powers immediately to consute it. Your great disputers, and your men of controvers, are in continual danger of this sort of prejudice: they contend often for victory, and will maintain what-soever they have asserted, while truth is lost in the

n

P

te

fo

fi

0

n

ſu

18

V

a

1

b

r

noise and tumult of reciprocal contradictions; and it frequently happens, that a debate about opinions is turn-

ed into a mutual reproach of persons.

The prejudice of credulity may in some measure be cured, by learning to set a high value on truth, and by taking more pains to attain it; remembering that truth oftentimes lies dark and deep, and requires us to dig for it as hid treasure; and that falshood often puts on a fair disguise, and therefore we should not yield up our judgment to every plausable appearance. It is no part of civility or good breeding to part with truth, but to

maintain it with decency and candour.

Aspirit of contradiction is so pedantick and hateful, that a man should take much pains with himself to watch against every instance of it: he should learn so much good humour, at least, as never to oppose any thing without just and solid reason for it: He should abate some degrees of pride and moroseness, which are neversailing ingredients of this fort of temper; and should seek after so much honessy and conscience as never to contend for conquest or triumph: but to review his own reasons, and to read the arguments of his opponents (if possible) with an equal indifferency, and be glad to spy truth and to submit to it, though it appear on the opposite side.

(2.) There is another pair of prejudices derived from two tempers of mind, near a kin to those I have just mentioned; and these are the dogmatical and the sceptical humour; i. e. always positive, or always doubting.

By what means foever the dogmatist came by his opinions, whether by his fenses, or by his fancy, his education, or his own reading, yet he believes them all with the same assurance that he does a mathematical truth; he has scarce any mere probabilities that belong to him; every thing with him is certain and infallible; every Punctilio in religion is an article of his faith, and he answers all manner of objections by a sovereign contempt.

Persons of this temper are seldom to be convinced

of any mistake: a full assurance of their own notions makes all the difficulties of their own side vanish so entirely, that they think every point of their belief is written as with sun-beams, and wonder any one should find a difficulty in it. They are amazed that learned men should make a controversy of what is to them so perspicuous and indubitable. The lowest rank of people, both in learned and in vulgar life, are very

subject to this obstinacy.

Scepticism is a contrary prejudice. The dogmatist is sure of every thing, and the sceptick believes nothing. Perhaps he has found himself often mistaken in matters of which he thought himself well assured in his younger days, and therefore he is assaid to give assent to any thing again. He sees so much shew of reason for every opinion, and so many objections also arising against every doctrine, that he is ready to throw off the belief of every thing: he renounces at once the pursuit of truth, and contents himself to say, there is nothing certain. It is well, if through the influence of such a temper, he does not cast away his religion as well as his philosophy, and abandon himself to a profane course of life, regardless of hell and heaven.

Both these prejudices last mentioned, tho' they are so opposite to each other, yet they arise from the same spring, and that is, impatience of study, and want of diligent attention in the search of truth. The dogmatist is in haste to believe something; he cannot keep himself long enough in suspence, till some bright and convincing evidence appear on one side, but throws himself casually into the sentiments of one party or another, and then he will hear no argument to the contrary. The sceptick will not take pains to search things to the bottom, but when he sees difficulties on both sides, resolves to believe neither of them. Humility of soul, patience in study, diligence in enquiry, with an honest zeal for truth, would go a great way towards the cure

of both these follies.

(3.) Another fort of temper that is very injurious to

u

ot

m

pr

ar

th

fo

eft

ce

ra

fo

to

an

(o

So

ca

hi

th

cle

So

ca

rie

fif

fre

a right judgment of things, is an inconfistant, fickle, changeable spirit, and a very uneven temper of mind. When such persons are in one humour they pass a judgment of things agreeable to it; when their humour changes, they reverse their first judgment, and embrace They have no steadiness of soul; they a new opinion. want firmness of mind, sufficient to establish themselves in any truth, and are ready to change it for the next calluring falshood that is agreeable to their change of fumour. This fickleness is sometimes so mingled with their very constitution by nature, or by distemper of body, that a cloudy day and a lowering sky shall strongly incline them to form an opinion both of themselves, and of persons and things round about them, quite different from what they believe when the fun shines, and the heavens are serene.

This fort of people ought to judge of things and persons in their most sedate, peaceful, and composed hours of life, and reserve these judgments for their

conduct at more unhappy feafons.

(4.) Some persons have a violent and turgid manner both of talking and thinking; whatsoever they judge of, it is always with a tincture of this vanity. They are always in extremes, and pronounce concerning every thing in the superlative. If they think a man to be learned, he is the chief scholar of the age: if another has low parts, he is the greatest blockhead in nature: if they approve any book on divine subjects, it is the best book in the world, next to the Bible: if they speak of a storm of rain or hail, it is the most terrible storm that fell since the creation; and a cold winter day is the coldest that ever was known.

But the men of this swelling language ought to remember, that nature has ten thousand moderate things in it, and does not always deal in extremes as they do.

(5.) I think it may be called another fort of prejudice derived from humour, when some men believe a doctrine merely because it is ancient, and has been long believed; others so fond of novelty, that nothing prevails

F

d

r

e

n

vails upon their assent so much as new thoughts and new notions. Again, there are some who set a high esteem upon every thing that is foreign and far-fetched; therefore China pictures are admired, how aukward soever: others value things the more for being of our own native growth, invention, or manufacture; and these as

much despise foreign things.

Some men of letters and theology will not believe a proposition even concerning a sublime subject, till every thing mysterious, deep, and difficult is cut off from it, though the scripture asserts it never so plainly; others are so fond of a mystery, and things incomprehensible, that they would scarce believe the doctrine of the trinity, if it could be explained; they incline to that soolish rant of one of the ancients credo quia impossibile est; I believe it, because it is impossible.

To cure these mistakes remember that neither antique nor novel, foreign nor native, mysterious nor plain, are

certain characters either of truth or falshood.

I might mention various other humours of men that excite in them various prejudices, and lead them into rash and mistaken judgments; but these are sufficient for a specimen.

II. There are feveral other weakneffes which belong to human nature, whereby we are led into mistakes, and indeed are rendered almost incapable of passing a folid judgment in matters of great depth and difficulty. Some have a native obscurity of perception, (or, shall I call it, a want of natural [agacity?] whereby they are hindered from attaining clear and distinct ideas. Their thoughts always feem to have fomething confused and cloudy in them, and therefore they judge in the dark. Some have a defect in memory, and then they are not capable of comparing their present ideas with a great variety of others, in order to secure themselves from inconfiftency in judgment. Others may have a memory large enough, yet they are subject to the same errors from a narrowness of soul, and such a fixation and confinement

to

fir

it

ca

m

au

poj

in

or

yo

pri

fai

an

finement of thought to a few objects, that they scarce ever take a survey of things wide enough to judge wisely and well, and to secure themselves from all inconsistencies.

Though there are natural defects and weaknesses, yet they may, in some measure, be relieved by labour, dili-

gence, and a due attention to proper rules.

But among all the cases of fulle judgment which are within ourselves, I ought by no means to leave out that univerful and original spring of error, which we are informed of by the word of God; and that is, the fin and defection of our first parents: whereby all our best natural powers, both of mind and body, are impaired, and rendered very much interior to what they were in a state of innocence. Our understanding is darkened, our memory contracted, our corrupt humours and passions are grown predominant, our reason enfeebled, and various diforders attend our constitution and animal nature, whereby the mind is strangely imposed upon in its judgment of things. Nor is there any perfect relief to be expected on earth. There is no hope of ever recovering from these maladies, but by a sincere return to God, in the ways of his own appointment, whereby we shall be kept safe from all dangerous and pernicious errors in the matters of religion; and tho' imperfections and mistakes will hang about us in this present life, as the effects of our original apostacy from God, yet we hope for a full deliverance from them when we arrive in heaven.

a direy ambi shenorom dibigiriso nd

a nerrance to er jest and tuestant. Carps and

Caliera may inve, a maniory

SECT.

## SECT. - IV.

haidness to treat release on the action.

Prejudices arising from other persons.

TYERE it not for the springs of prejudices that are lurking in ourselves, we should not be subject to so many mistakes from the influence of others: but fince our nature is so susceptive of errors on all sides, it is fit we should have hints and notices given us, how far other persons may have power over us, and become the causes of our false judgments. This might all be cast into one heap, for they are all near a-kin, and mingle with each other: but, for distinction sake, let them be called the prejudices of education, of custom, of authority, and fuch as arise from the manner of pro-

pofal.

ce

ge

n-

vet li-

are nat

n-

nd

12-

nd

a

d, nd

d.

al

on

ct

of

re

ıt,

d

01

is

m

m

I. Those with whom our education is entrusted may lay the first foundation of many mistakes in our younger years. How many fooleries and errors are instilled into us by our nurses, our fellow-children, by servants or unskilful teachers, which are not only maintained through the following parts of life, but sometimes have a very unhappy influence upon us! We are taught that there are goblings and bugbears in the dark; our young minds are crouded with the terrible ideas of ghosts appearing upon every occasion, or with the pleasant tales of fairies dancing at midnight. We learn to prophecy betimes, to foretell futurities by good or evil omens, and to presage approaching death, in a family, by ravens and little worms, which we therefore call a death-watch. -We are taught to know before-hand, for a twelvemonth together, which days of the week will be fair or foul, which will be lucky or unlucky; nor is there any thing fo filly, but may be imposed upon our understandings in that early part of life; and these ridiculous

tel

VO

th

tu

ar

d

lous stories abide with us too long, and too far influ.

ence the weaker part of mankind.

We chose our particular feet and party in the civil, the religious, and the learned life, by the influence of education. In the colleges of learning, some are for the nominals, and some for the realists in the science of metaphylics, because their tutors were devoted to The old philosophy and the new have these parties. gained thousands of partizans the same way; and every religion has its infant votaries, who are born, live. and die in the fame faith, without examination of any article. The Turks are taught early to believe in Ma. bomet; the Few's in Mofes; the heathens worship a multitude of gods, under the force of their education .-And it would be well if there were not millions of Christians, who have little more to say for their religion, than that they were born and bred up in it. The greatest part of the christian world can hardly give any reason why they believe the Bible to be the word of God, but because they have always believed it, and they were taught so from their infancy. As Jews and Tarks, and American beathers, believe the most monstrous and incredible stories, because they have been trained up amongst them, as articles of faith; so the Papists believe their transubstantiation, and make no difficulty of affenting to impossibilities, since it is the current doctrine of their catechisms. By the same means the feveral fects and parties in Christianit, believe all the strained interpretations of scripture by which they have been taught to support their own tenets: they find nothing difficult in all the abfurd gloffes and far-fetched fenses that are sometimes put upon the words of the facred writers, because their ears have been always accustomed to these glosses; and there they sit so smooth and eafy upon their understandings, that they know not how to admit the most natural and easy interpretation in opposition to them.

filly, but may be imposed upor our unlike-

landings, in that early part of life; and those clotica-

t II.

nflu-

civil,

ce of

for

ence

ed to

have

eve-

live,

any

Ma-

nul-

s of

igi-

The

any

Fod, hey

rks.

ous

ned

ifts

ulty

OC-

the

the

ve

nd

hed

he

C-

th

W

2-

In

In the same manner we are nursed up in many silly and gross mistakes about domestick affairs, as well as in matters of political concernment. It is upon the same ground that children are trained up to be whigs and tories betimes; and every one learns the distinguishing terms of his own party, as the papists learn to say their prayers in Latin; without any meaning, reason, or devotion.

This fort of prejudice must be cured by calling all the principles of our younger years to the bar of more mature reason, that we may judge of the things of nature, and political affairs, by juster rules of philosophy and observation: and even the matters of religion must be first enquired into by reason and conscience; and when these have led us to believe scripture to be the word of God, then that becomes our sovereign guide and reason, and conscience must submit to receive its dictates.

II. The next prejudice which I shall mention is, that which arises from the custom or fashion of those amongst whom we live. Suppose we have freed ourselves from the younger prejudices of our education, yet we are in danger of having our minds turned aside from truth by the influence of general custom.

Our opinions of meats and drinks, of garments and forms of falutation, are influenced much more by custom, than by the eye, the ear, or the taste. Custom prevails even over sense itself; and therefore no wonder if it prevail over reason too. What is it but custom that renders many of the mixtures of sood and sauces elegant in Britain, which would be aukward and nauseous to the inhabitants of China; and indeed were nauseous to us when we first tasted them? What but custom could make those salutations polite in Muscowy which are ridiculous in France or England? We call ourselves indeed the politer nations; but is it we who judge thus of ourselves? and that fancied polite-

R 2

ness,

ness is oftentimes more owing to custom than reason. Why are the forms of our present garments counted beautiful, and those fashions of our ancestors the matter of fcoff and contempt, which in their day were all decent and genteel? It is the custom that forms our opinion of drefs, and reconciles us by degrees to those habits, which at first feemed very odd and monstrous. It must be granted there are some garments and habits which have a natural congruity or incongruity, modesty or immodesty, decency or indecency, gaudery or gravity; though for the most part there is but little of reason in these affairs: but what little there is of reason, or natural decency, custom triumphs over it all. It is almost impossible to persuade a gay lady that any thing can be decent which is out of fashion: and it were well if falbion stretched its power no farther than the business of drapery and the fair fex.

The methods of our education are governed by custom. It is custom and not reason that sends every boy to learn the Roman Poets, and begin a little acquaintance with Greek, before he is bound an apprentice to a soap-boiler or a leather-seller. It is custom alone that teaches us Latin by the rules of a Latin Grammar; a tedious and absurd method! And what is it but custom that has for past centuries confined the brightest geniuses, even of high rank in the semale world, to the only business of the needle, and secluded them most unmercifully from the pleasures of knowledge, and the divine improvements of reason? But we begin to break all these chains, and reason begins to distate the education of youth. May the growing age be

learned and wife!

It is by the prejudice arising from our own customs, that we judge of all other civil and religious forms and practices. The rites and ceremonies of war and peace in other nations, the forms of weddings and funerals, the several ranks of magistracy, the trades and employments of both sexes, the publick and the domestick affairs

affairs of life, and almost every thing of foreign customs, is judged irregular. It is all imagined to be unreasonable or unnatural, by those who have no other rule to judge of nature and reason, but the customs of their own country, or the little town where they dwell .-Custom is called a second nature; but we often mistake: it for nature itself.

II.

ason.

nted

mat-

all r 0-

hofe

ous.

bits

mo-

y or little

s of all.

any d it

han

cuf-

boy

ainto

one

ar; but

ht-

rld,

em

ge,

gin

ate

be

ms,

nd

ace

ils,

oy-ick

irs

Besides all this, there is a fashion in opinions, there is a fashion in writing and printing, in style and language. In our day it is the vogue of the nation, that parliaments may fettle the succession of the crown, and that a people can make a king; in the last age this was a doctrine a kin to treason. Citations from the Latin poets were an embellishment of style in the last century; and whole pages in that day were covered with them: it is now forbidden by custom, and exposed by the name of pedantry; whereas in truth both these are extremes. Sometimes our printed books shall abound in capitals, and fometimes reject them all. Now we deal much in effays, and most unreasonably despise Systematic learning; whereas our fathers had a just value for regularity and systems: then folios and quartos were the fashionable fizes, as volumes in octavo are now. We are ever ready to run into extremes; and yet custom still persuades us that reason and nature are on our fide.

This business of the fashion has a most powerful influence on our judgments; for it employs those two strong engines of fear and shame to operate upon our understandings with unhappy success. We are ashamed to believe or profess an unfashionable opinion in philosophy; and a cowardly soul dares not so much as indulge a thought contrary to the established or fashionable faith, nor act in opposition to custom, though it be according to the dictates of reason.

I confess there is a respect due to mankind which should incline even the wifest of men to follow the innocent customs of their country in outward practices of

R 3

the

the civil life, and in some measure to submit to fashion in all indifferent affairs, where reason and scripture make no remonstrances against it. But the judgments of the mind ought to be for ever free, and not biassed by the customs and fashions of any age or nation whatsoever.

To deliver our understandings from this danger and slavery, we should first confider these three things.

particular nation, or age, fpring from bumour rather than reason. Sometimes the humour of the prince prevails, and sometimes the humour of the people. It is either the great or the many who dictate the fashion; and these have not always the highest reason on their side.

2. Confider also, that the customs of the same nation in different ages, the customs of different nations in the same age, and the customs of different towns and villages in the fame nation, are very various and contrary to each other. The fashionable learning, language, fentiments, and rules of politeness differ greatly in different countries and ages of mankind; but truth and reason are of a more uniform and steady nature, and do not change with the fashion. Upon this account, to cure the prepoffessions which arise from custom it is of excellent use to travel, and see the customs of various countries, and to read the travels of other men, and the history of past ages, that every thing may not feem strange and uncouth, which is not practifed within the limits of our own parish, or in the narrow space of our own life-time.

3. Consider yet again, how often we ourselves have changed our own opinions concerning the decency, propriety, or congruity of several modes or practices in the world, especially if we have lived to the age of thirty or forty. Custom or fastion, even in all its changes, has been ready to have some degree of ascendency over our understandings, and what at one time seemed

decent

I.

on

re

its

έd

at-

nd

ny

er

re-

is

n:

eir

on

in

nd

n-

nly

th

e,

C-

7172

ns

er

ay

W

ve

y,

in

of s,

y

decent appear obsolete and disagreeable afterward, when the fashion changes. Let us learn therefore to abstract as much as possible from custom and fashion, when we would pass a judgment concerning the real value and intrinsic nature of things.

III. The authority of men is the fpring of another run

of prejudices.

Among these the authority of our forefathers and ancient authors is most remarkable. We pay deference to the opinion of others, merely because they lived a thousand years before us; and even the trisles and impertinences, that have a mark of antiquity upon them, are reverenced for this reason, because they came from the ancients. It is granted, that the ancients had many wise and great men among them; and some of their writings, which time hath delivered down to us, are truly valuable: but those writers lived rather in the infant state of the world; and the philosophers, as well as the polite authors of our age, are properly the elders, who have seen the mistakes of the younger ages of mankind, and corrected them by observation and experience.

Some borrow all their religion from the fathers of the Christian church, or from their synods or councils; but he that will read Monsieur Daille on the use of the fathers, will find many reasons why they are by no means sit to dictate our faith, since we have the gospel of Christ, and the writings of the Apostles and Prophets in our own hands.

Some persons believe every thing that their kindred, their parents, and their tutors believe. The veneration and the love which they have for their ancestors incline them to swallow down all their opinions at once, without examining what truth or falshood there is in them. Men take up their principles by inheritance, and defend them as they would their estates, because they are born heirs to them. I freely grant, that parents are appointed by God and nature to teach usuall

the sentiments and practices of our younger years; and happy are those whose parents lead them into the paths of wisdom and truth! I grant farther, that when persons come to years of discretion, and judge for themselves, they ought to examine the opinions of their parents with the greatest modesty, and with an humble deserence to their superior chraacter; they ought in matters persectly dubious to give the preserence to their parents advice, and always to pay them the first respect, nor ever depart from their opinions and practice, till reason and conscience make it necessary.

But after all, it is possible that parents may be mistaken, and their reason and scripture ought to be our final rules of determination in matters that relate to this

world, and that which is to come.

Sometimes a favourite author, or a writer of great name, drags a thousand followers after him into his own mistakes, merely by the authority of his name and character. The fentiments of Aristotle were imbibed and maintained by all the schools in Europe for several centuries; and a citation from his writings was thought a fufficient proof of any proposition. The great Descartes had also too many implicit believers in the last age. though he himfelf, in his philosophy, difclaims all such influence over the minds of his readers. Calvin and Luther, in the days of reformation from popery, were learned and pious men; and there have been a fuccession of their disciples even to this day, who pay too too much reverence to the words of their masters. There are others who renounce their authority, but give themselves up in too servile a manner to the opinion and authority of other masters, and follow as bad or worse guidesin religion.

If only learned, and wife, and good men had influence on the fentiments of others, it would be at least a more excusable fort of prejudice; and there would be some colour and shadow of reason for it: But that riches, honours, and outward splendour should set up persons

e

at

e

of

n

m

d

ſ-

ır

is

at

is

id

d

al

ht

r-

e,

ch

id

re

C-

00

S.

ut

n

or

1-

a

e

at

ip 15

persons for dictators to all the rest of mankind; this is a most shameful invasion of the right of our understandings, on the one hand, and as shameful a slavery of the foul on the other. The poor man, or the labourer, too often believes fuch a principle in politicks, or in morality, and judges concerning the rights of the king and the people, just as his wealthy neighbours does. Half the parish follows the opinion of the esquire; and the tenants of a manor fall in with the sentiments of their lord, especially if he lives amongst them. How unrea-

fonable, and yet how common is this !

As for principles of religion, we frequently find how they are taken up and forfaken, changed and refumed by the influence of princes. In all nations the priests have much power also in dictating the religion of the people, but the princes dictate to them: and where there is a great pomp and grandeur attending the priesthood in any religion whatfoever, with fo much the more reverence and stronger faith do the people believe whatever they teach them: yet it is too often evident that riches, and dominions, and high titles in church or flate have no manner of pretence to truth and certainty, wildom and goodness, above the rest of mortals, because these superiorities in this world are not always conferred according to merit.

I confess, where a man of wisdom and years of observation and experience, gives us his opinion and advice in matters of the civil on the moral life, reason tells us. we should pay great attention to him; it is probable he may be in the right. Where a man of long exercise in piety speaks of practical religion, there is a due deference to be paid to his fentiments: and the fame we may fay concerning an ingenious man long versed in any art or science; he may justly expect due regard when he speaks of his own affairs and proper business. But in other things each of these may be ignorant enough; notwithstanding all their piety and years, and particular skill : nor even in their own proper province are

01

ar

do

pr

m

CO

an

do

sh asl

ari

un

of

fci

ha

they to be believed in every thing without referve, and

without examination.

To free ourselves from these prejudices, it is sufficient to remember, that there is no rank nor character among mankind, which has any just pretence to sway the judgments of other men by their authority: for there have been persons of the same rank and character who have maintained different and contrary sentiments; but all these can never be true, and therefore the mere name of reputation that any of them possesses, is not a a sufficient evidence for truth.

Shall we believe the ancients in philosophy? But some of the ancients were Stoics, some Peripatetics, some Platonics, and some Epicureans, some Cinics, and some Sceptics? Shall we judge of matters of the Christian faith by the fathers, or primitive writers, for three or four hundred years after Christ? But they often contradicted one another, and themselves too; and, what is worse, they sometimes contradicted the scripture itself. Now, among all these different and contrary sentiments in philosophy and religion, which of the ancients must we believe, for we cannot believe them all?

Again, To believe in all things as our predecessors did, is the ready way to keep mankind in an everlasting state of infancy, and to lay an eternal bar against all the improvements of our reason and our happiness.—Had the present age of philosophers satisfied themselves with the substantial forms, and occult qualities of Aristotle, with the solid spheres, eccentrics, and epicycles of Ptolomy, and the ancient Astronomers, then the great Lord Bacon, Copernicus, and Descartes, with the great Sir Isaac Newton, Mr. Locke, and Mr. Boyle, hadrisen in our world in vain. We must have blundered on still in successive generations amongst absurdaties and thick darkness, and a hundred useful inventions, for the happiness of human life, had never been known.

Thus it is in matters of philosophy and science. But you will say, shall not our own ancestors determine our

judgments

T.

d

i-

a-

ay

or

er

S;

re

: a

ne

ne

ne

an

or

n-

at

it-

n-

its

ors

n-

all

res

if-

of

eat

eat

en

till

ck

p-

ut

ar

nts

If they must, then the child of a heathen must believe that heathenism is truth; the son of a Papist must believe all the absurdities of popery; the posterity of the Jews and Socinians must for ever be Socinians and Jews; and the man whose father was of Republican principles, must make a succession of Republicans in his family to the end of the world. If we ought always to believe whatsoever our parents, or our priests, or our princes believe, the inhabitants of China, ought to worship their own idols, and the savages of Africa ought to believe all the nonsense, and practise the idolatry of their negro fathers and kings. The British nation, when it was heathen, could never have become Christian; and when it was a slave to Rome, it could

never have been reformed.

Besides, let us consider that the great God, our common maker, has never given one man's understanding a legal and rightful fovereignty to determine truths for others, at least after they are past the state of childhood or minority. No fingle person, how learned, and wise, and great foever, or whatfoever natural, or civil, or ecclesiastical relation he may have to us, can claim this dominion over our faith. St. Paul the apostle, in his private capacity, would not do it: nor hath an inspired man any fuch authority, until he makes his divine commission appear. Our Saviour himself tells the Jews, that if he had not done fuch wondrous works among them, they had not finned in disbelieving his. doctrines, and refusing him for the Messiah. No bishop or presbyter, no fynod or council, no church or affembly of men, (fince the days of inspiration) hath power derived to them from God to make creeds or articles of faith for us, and impose them upon our understandings. We must all act according to the best of our own light, and the judgment of our own consciences, using the best advantages which providence hath given us, with an honest and impartial diligence

proportion the the main

ti

pi

6

.01

C

b

h

te

ar

fu

di

ar

of

th

th

te

tr

fo

ar

fo

Ja

13

to enquire and search after truth; for every one of us must give an account of himself to God. To believe as the church or the court believes, is but a forry and a dangerous faith; this principle would make more heathens, than Christians, and more Papists than Protestants; and perhaps lead more souls to hell than to heaven; for our Saviour himself has plainly told us, that if the blind will be led by the blind, they must both fall into the ditch.

Though there be fo much danger or error arising from the three prejudices last mentioned, yet before I difinifs this head, I think it proper to take notice, that as education, custom and authority, are no fure evidences of truth, fo neither are they certain marks of fallbood; for reason and scripture may join to dictate the same things which our parents, our nurses, our tutors, our friends, and our country believe and profess. Yet there appears fometimes in our age a pride and petulancy in youth, zealous to cast off the sentiments of their fathers and teachers, on purpose to shew that they carry none of the prejudices of education and authority about them. They indulge all manner of licentious opinions and practices, from a vain pretence of afferting their liberty. But, alas! this is but changing one prejudice for another; and fometimes it happens by this means that they make a facrifice both of truth and virtue to the vile prejudices of their pride and fenfuality.

IV. There is another tribe of prejudices which are near a-kin to those of authority, and that is, when we receive a doctrine because of the manner in which it is proposed to us by others. I have already mentioned the powerful influence that oratory and fine words have to infinuate a false opinion, and sometimes truth is refused, and suffers contempt in the lips of a wise man, for want of the charms of language: but there are several other manners of proposals whereby mistaken sentiments are powerfully conveyed into the mind.

Some

There

Some persons are easily persuaded to believe what another dictates with a positive air, and a great degree of affurance; They feel the overbearing force of a confident dictator, especially if he be of a superior rank or character to themselves.

Some are quickly convinced of the truth of any doctrine, when he that proposes it puts on all the airs of piety, and makes folemn appeals to heaven, and protellations of the truth of it; the pious mind of a weaker christian is ready to receive any thing that is pronounc-

ed with fuch an awful folemnity.

It is a prejudice near a-kin to this, when a humble foul is frighted into any particular fentiments of religion, because a man of great name or character pronounces Herely upon the contrary fentiments, casts the difbeliever out of the church, and forbids him the gates of heaven.

Others are allured into particular opinions by gentler practices on the understanding: not only the foft tempers of mankind, but even hardy and rugged fouls are sometimes led away captives to error by the foft airs of address, and the sweet and engaging methods of per-

fuation and kindness.

us

as

a

a-0-

a-

if

to

ng

e I

at

ces

d;

ne

ur

et

n-

eir

ey

ity

us

ng

·e-

is

ne

ch

en

ch

eď

ve

e-

n,

e- :

10.0

10

I grant, where natural or revealed religion plainly dictate to us the infinite and everlasting importance of any facred doctrine, it cannot be improper to use any of these methods to persuade men to receive and obey the truth, after we have given fufficient reason and argument to convince their understandings. Yet all these methods, considered in themselves, have been often used to convey falshood into the soul as well as truth; and if we build our faith merely upon these foundations, without regard to the evidence of truth and the strength of argument, our belief is but the effest of prejudice: for neither the positive, the awful or Jolemn, the terrible or the gentle methods of address carly any certain evidence with them that truth lies onthat fide.

iı

h

to

21

a n

dir

A

the

the

the

here is another manner of proposing our own opinion, or rather opposing the opinions of others, which demands a mention here, and that is when persons make a jest serve instead of an argument; when they resute what they call an error by a turn of wit, and answer every objection against their own sentiments, by casting a sneer upon the objector. These scaffers practise with success upon weak and cowardly spirits: such as have not been well established in religion or morality have been laughed out of the best principles by a consident buffoon; they have yielded up their opinions to a witty banter, and sold their faith and religion for a jest.

There is no way to cure these evils in such a degenerate world as we live in, but by learning to distinguish well between the substance of any accirine, and the manner of address either in proposing, attacking, or desending it; and then by setting a just and severe guard of reason and conscience over all the exercises of our judgment, resolving to yield to nothing but the convincing evidence of truth, religiously obeying the right of reason in matters of pure reason, and the dictates of revelation in things that relate to our

faith.

Thus we have taken a brief survey of some of the infinite varieties of prejudice that attend mankind on every side, in the present state, and the dangers of error or of rash judgment, we were perpetually exposed to in this life: this chapter shall conclude with one re-

mark, and one piece of advice.

The remark is this. The same opinion, whether false or true, may be dictated by many prejudices at the same time; for, as I hinted before, prejudice may happen to dictate truth sometimes as well as error. But where two or more prejudices oppose one another, as it often happens, the stronger prevails and gains the effent: yet how seldom does reason interpose with sufficient power to get the ascendant of them all as it out to do!

The

1.

i-

ch

ns

ey

n-

by

C+

5:

or

es

11-

ac

e-.

1-

or re es ne

ır

e

-

d

1

e

•

2

#7

The advice follows, viz. Since we find such a swarm of prejudices attending us both within and without; fince we feel the weakness of our reason, the frailty of our natures, and our insufficiency to guard ourselves fromerror upon this account, it is not at all unbecoming the character of a logician or a philosopher (together with the advice already given) to direct every person in his search after truth to make his daily addresses to heaven, and implore the God of truth to lead him into all truth; and to ask wisdom of him who giveth liberally to them that ask it, and upbraiderh us not with our own follies.

Such a devout practice will be an excellent preparative for the best improvement of all the directions and rules proposed in the two following chapters.

## CHAP. IV.

General Directions to affift us in judging aright.

THE chief design of the art of Logick is to assist us in forming a true judgment of things; a few proper observations for this end have been dropt occasionally in some of the foregoing chapters: Yet it is necessary to mention them again in this place, that we may have a more complete and simultaneous view of the general directions, which are necessary in order to judge aright. A multitude of advices may be framed for this purpose, the chief of them may, for order sake, be reduced to the following heads.

I. Direct. When we consider ourselves as Philosophers or fearchers after truth, we should examine all

S 2

min

COL

divi

And

be c

of o

forn

object

diffi

as j Thi

of L

be r

But

whi

feat

take

the

out

prof

twil

atre

tog

thei

for 1

to a

that

pret

that

ny a

mal

imp

ed,

con

of r

our old opinions afresh, and enquire what was the ground of them, and whether our assent was built on just evidence; and then we should cast off all those judgments which were formed beretofore without due examination. A man in pursuit of knowledge should throw off all those prejudices which he had imbibed in times past, and guard against all the springs of error mentioned in the preceding chapter, with the utinost watchfulness for time to come.

Observe here, that the rule of casting away all our former predicate opinions and fentiments, is not propoled to any of us to be practifed at once, confidered as men of business or religion, as friends or neighbours, as fathers or fons, as magistrates, subjects, or Christians; but merely as philosophers and searchers after truth: and though it may be well prefumed that many of our judgments both true and falfe, together with the practices built thereon in the natural, the civil, and the religious life, were formed without sufficient evidence; yet an universal rejection of all these might destroy at once our present sense and practice of duty with regard to God, ourselves, and our fellow creatures. Mankind would be hereby thrown into fuch a state of doubting and indifference, that it would be too long e'er they recovered any principles of virtue or religion by a train of reasonings.

Besides, the common affairs of human life often demand a much speedier determination, and we must many times act upon present probabilities: The bulk of mankind have not time and leisure, and advantages sufficient to begin all their knowledge anew, and to build up every single-opinion and practice asresh upon

the justest grounds of evidence.

Yet let it be observed also, that so far as any person is capable of forming and correcting his notions and his rules of conduct in the natural, civil, and religious life, by the strict rules of Logick; and so far as he hath time and capacity to review his old opinions, to re-examine all those which are any way doubtful, and to determine

nd

i-

its

n.

all

A;

in Is

ur

-1c

25

as

53

b :

ur

C-

**i**-

et

ce

to

nd

ng

2-

n

ft

of.

35.

o

D.

d

· .

e

mine nothing without just evidence, he is likely to become so much the wiser, and the happier man, and (if divine grace assist him) so much the better Christian. And though this cannot be done all at once, yet it may be done by prudent steps and degrees, till our whole set of opinions and principles be in time corrected and reformed, or at least established upon juster soundations.

II. Direct. Endeavour that all your ideas of those objects concerning which you pass judgment, be clear and diffinet, complete, comprehensive, extensive, and orderly; as far as you have occasion to judge concerning them. This is the substance of the last Chapter of the first part The rules which direct our conceptions must bereviewed, if we would form our judgments aright. But if we will make hafte to judge at all adventures, while our ideas are dark and confused, and very imperfill we shall be in danger of running into many mistakes. This is like a person who would pretend to give the fum total of a large account in arithmetick, without surveying all the particulars; or as a painter, who professes to draw a fair and distinct landskip in the twilight, when he can hardly diftinguish a house from. a tree.

Observe here, that this direction does not require us togain clear, distinct, complete ideas of things in all their parts, powers, and qualities in an abjolute sense, for this belongs to God alone, and is impossible for us to attain: But is expressed in a relative or limited sense; that is, our ideas should be clear, distinct, and comprehensive, &c. at least so far, as we have occasion at that time to judge concerning them. We may form many and certain judgments concerning God, angels, animals, men, heaven, hell, &c. by those partial and very impersect conceptions of them to which we have attained, if we judge no farther concerning them than our conceptions reach.

We may have a clear and distinct idea of the existence of many things in nature, and affirm that they do exist,

S 3

though

though our ideas of their intimate essences and causes, their relations and manners of action are very confused and obscure. We may judge well concerning several properties of any being, though other properties are unknown; for, perhaps, we know not all the properties of

any being whatfoever.

Sometimes we have clear ideas of the absolute properties of an object; and we may judge of them with certainty, while the relative properties are very obscure and unknown to us. So we may have a clear and just idea of the area of a parallelogram, without knowing what relation it bears to the area of a triangle or a polygon. I may know the length of the diameter of a circle, without knowing what proportion it has to the cir-

cumference.

There are other things, whose external relative properties, with respect to each other, or whose relation to us we know better than their own inward and absolute properties, or their effential diffinguishing attributes. We perceive clearly, that fire will warm or burn us, and will evaporate water; and that water will allay our thirst, or quench the fire, though we know not the inward distinguishing particles or prime essential properties of fire or water. We may know the King, and Lord Chancellor, and affirm many things of them in their legal characters, though we can have but a confused idea of their persons or natural features, if we have never feen their faces. So the scripture has revealed God himself to us, and as our Creator, Preferver, Redeemer, and Sanctifier, and as the object of our worship in clearer ideas than it has revealed many other abstruse questions which may be raised about his own divine essence or substance, immensity or omnipresence.

This therefore is the general observation in order to guide our judgments, that we should not allow ourselves to form a judgment concerning things farther than our clear and distinct ideas reach, and then we are not in

danger of error.

W

b

to

tl

f

b

j

11.

fes,

fed

ral

in-

of

ro-

ith

ure

uft

ing

po-

cle.

11-

ro-

to

ute

es.

us,

our

in-

er-

ind in

n-

we

e-

re-

of

ny

ut

or

to

ies ur

in

ut

But there is one confiderable objection against this rule, which is necessary to be answered; and there is one just and reasonable exception, which is as needful to be mentioned.

The objection is this: may we not judge safely concerning some total or complete ideas, when we have clear perception only of some parts or properties of them? May we not affirm, that all that is in God is eternal, or that all his unknown attributes are infinite, tho we have so very imperfect an idea of God, eternity, and infinity? Again, may we not safely judge of particular objects whose idea is obscure by a clear idea of the general? May I not affirm, that every unknown species of animals has inward springs of motion, because I have a clear idea that these inward springs belong to an animal in general?

Answer. All those supposed unknown parts, properties, or species, are clearly and distinctly perceived to be connected with, or contained in the known parts, properties, or general ideas, which we suppose to be clear and distinct, as far as we judge of them: And as we have no particular idea of those unknown divine attributes, or unknown species of animals: so there is nothing particular affirmed concerning them beyond what belongs to the general idea of divine attributes, or animals, with which I clearly and distinctly perceive them

to be connected.

It may be illustrated in this manner. Suppose a long thain lies before me, whose nearest links I see are iron rings, and I see them fastened to a post near me; but the most distant links lie beyond the reach of my sight, so that I know not whether they are oval or round, brass or iron; now I may boldly affirm the whole length of this chain is fastened to the post, for I have a clear idea that the nearest links are thus fastened, and a clear idea that the distant links are connected with the nearest, if I can draw the whole chain by one link.

Or thus; if two known ideas, A and B are evidently joined, or agree; and if C unknown be included in A,

and .

W

an

m

rig the

of

pr

ev

Ic

18

an

th

dis

and also D unknown be included in B, then I may affirm, that C and D are joined and agree: for I have a clear perception of the union of the two known ideas, A and B; and also a clear perception of the connexion of the unknown ideas with the known. So that clear and distinct ideas must still abide as a general necessary qualification in order to form right judgments: and indeed it is upon this foot, that all Ratiocination is built, and the conclusions are thus formed, which deduce unknown things from things known.

Yet it seems to me, that there is one just limitation or exception to this general rule of judgment, as built on

clear and distinct ideas, and it is this:

Exception. In matters of mere testimony, whether human or divine, there is not always a necessity of clear and distinguished ideas of the things which are believed. Tho' the evidence of propositions, which are entirely formed by ourselves, depends on the clearness and distinctness of those ideas which they are composed, and on our own clear perception of their agreement or disagreement, yet we may justly assent to propositions formed by others, when we have neither a very clear conception in ourselves of the two ideas contained in the words, nor how they agree or disagree; provided always that we have a clear and sufficient evidence of the credibility of the

Thus when we read in scripture the great doctrines of the Deity of Christ, and of the union of the divine

of the Deity of Christ, and of the union of the divine and human natures in him, of the divine agency of the blessed Spirit, that the Son is the brightness of his Father's glory, that all things were created by him, and for him, that the Son shall give up his kingdom to the Father, and that God shall be all in all, we may safely believe them: for, though our ideas of these objects themselves are not sufficiently clear, distinct, and perfect, for our own minds to form these judgments or propositions concerning them, yet we have a clear and distinct perception of God's revealing them, or that they are contained in scripture; and this is sufficient evidence to determine our assent.

The same thing holds true in some measure, where tredible human testimony assures us of some propositions, while we have no sufficient ideas of the subject and predicate of them to determine our assent. So, when an honest and learned mathematician assures a ploughman, that the three angles of a triangle are equal to two right angles, or that the square of the hypotenuse of a right-angled triangle is equal to the sum of the squares of the two sides; the ploughman, who has consuled ideas of these things, may firmly and safely believe these propositions upon the same ground, because he has evidence of the skill and faithfulness of his informer.\*

III. Direction.

Perhaps some may object against this representation of things, and say, that "we cannot properly be said to believe a proposition "any farther than we ourselves have ideas under the terms; there if fore, if we have roideas under the terms, we believe nothing but the connexion of words or founds; and if we have but led serve and inadequate ideas under the terms, then we partly believe a connexion of things, and partly a connexion of sounds; but that we cannot properly be said to believe the proposition, for our faith

" can never go beyond our ideas."

Now, to fet this matter in a clear light, I suppose that every proposition which is proposed to my assent, is a sentence made up of terms which have some ideas under them known of unknown to med I consess, if I believe there are no ideas at all under the terms, and there is nothing meant by them, then indeed (with regard to me) it is the mere joining of sounds: but if, for instance, a ploughman has credible information from an honest and skilful mathematician, that an ellipsis is made by the settion of a cone, he believes the proposition, or he believes the sentence is true, as it is made up of terms which his informant understands, though the ideas be unknown to him; that is, he believes there are some ideas which his informant that under these words which are really connected. And, I think this may justly be called believing the proposition, for it is a belief of something more than the mere joining of sounds; it is a belief of the real connexion of some unknown ideas belonging to those sounds, and in this sense a man may be said to believe the truth of a proposition which he doth not understand at all.

With more reason still may we be said to believe a proposition upon credible testimony, if we have some fort of ideas under the testins,
though they are but partial or inadequate, and obscure; such as
divine answers were given by Urim and Thummim: for, since it is
purely upon testimony, we believe the known parts of the ideas
signified by those words to be connected, upon the same testimony,
we may also believe all the unknown parts of the ideas signified by

der

for

the

on

in

or

beli

litu

wil

tru

and

Qu:

affe

kne

pof

ide

in t

it,

to

led

rul

Ver

the

of :

dea

tru

and comprehensive ideas as is needful, both of the subject and predicate of a proposition, then compare those
ideas of the subject and predicate together with the utmost attention, and observe how far they agree, and
wherein they differ: whether the proposition may be
affirmed absolutely or relative, whether in whole or in
part, whether universally or particularly, and then
under what particular limitations. Turn these ideas
about in your mind, and take a view of them on all
sides, just as a major would do to see whether two
hewn stones exactly suit each other in every part, and
are fit to be joined in erecting a carved or fluted pillar.

Compare

those words to be connected, (viz.) because our informant is knowing and faithful. And in this sense we may justly be said to believe a proposition of scripture entirely, which we understand but very imperfessly, because God who reveals it is knowing and sufficient

In perfection.

And indeed, unless this representation of the matter be allowed, there are but very sew propositions in the world, even in bument things, to which we can give an entire affent, or which we may be said either to know, or to believe, because there is scarce any thing on earth of which we have an adequate, and most persect idea.—And it is evident that in divine things there is scarce any thing which we could either know or believe without this allowance: for, though reason and revelation join to inform me, that God is bely, how exceeding inadequate are my ideas of God, and of his belines? Yet I may boldly and entirely affent to this whole proposition, since I am sure that every known and unknown idea signified by the term God is connected with the ideas of the term beliness, because reason partly informs me, but especially because the divine testimony which has connected them, is certainly, credible.

I might argue upon this head perhaps more forcibly from the doctrine of God's incomprehensibleness. If we could believe nothing but what we have ideas of, it would be impossible for us to believe that God is incomprehensible; for this implies in it a belief, that there are some unknown ideas belonging to the nature of God. Therefore we do both believe and profess something concerning unknown

ideas, when we believe and profess God is incomprehensible.

I persuade myself, that most of those very persons who object against my representation of things, will yet readily confess, they believe all the propositions in scripture, rather than declare they do not believe several of them; though they must acknowledge that several of them are far above their understanding, or that they have scarce any ideas of the true sense of them. And therefore, where propositions Compare the whole ful jest with the whole predicate in their feveral parts; take heed in this matter that you neither add to, nor diminish the ideas contained in the subject, or in the predicate; for such an inadvertence or mitake will expose you to great error in judgment.

IV. Ditect. Search for evidence of truth with diligence and honesty; and be heartily ready to receive evidence, whether for the agreement or disagreement of ideas.

Search with diligence; spare no labour in searching for the truth, in due proportion to the importance of the proposition. Read the best authors who have writen that subject; consult your wise and learned friends in conversation; and be not unwilling to borrow hints toward your improvement, from the meanest person,

propositions, derived from credible testimony, are made up of dark or inacequate ideas, I think it is much more proper to say, we believe them, than that sue do not believe them, lest we cut off a mullitude of the propositions of the Bible from our affent of faith.

Yet let it be observed here, that when we believe a proposition on mere testimony, of which we have no ideas at all, we can only besaid to give a general implicit assent to the truth of that proposition, without any particular knowledge of, of explicit assent to the special with contained in that proposition: and this our implicit assent is of very little use, unless it be to testity our belief of the knowledge and veracity of him that informs us.

As our ideas of a proposition are more or less clear and adequate, as well as just and proper, so we explicitly affent more or
less to the particular truth contained in that proposition. And our affent hereby becomes more or less useful for the increase of our

knewledge, or the direction of our practice.

When divine testimony plainly proposes to our faith such a proposition where fowe have but obscure, doubtful and inadequate ideas, we are bound implicitly to believe the south of it expressed in those terms in order to shew our submission to God who revealed it, as a God of perfect knowledge and veracity: but it is our duty to use all proper methods to obtain a farther and explicit knowledge of the particular truth contained in the proposition, if we would improve by it either in knowledge or virtue. All necessary rules of grammar and criticism should be employed to find out the very ideas that belong to those words, and which were designed by the divine speaker or writer. Though we may believe the truth of a proposition which we do not understand, yet we should endeavour to understand every proposition which we believe to be time.

bose ut-

II.

lear.

be r in

leas all two

and lar.

pare

ieve very ient

ved,

be ning

for,

by

ine

the ing

rewa

beg do

ere ns

V

I

to

th

de

W

110

21

fh pr

ru

the

evi

Scio

fac

the

Smo

mu

mu

fha

in f

ly v

qua

off,

our

help

ther

nati

effec

por

nor to receive any glimple of light from the most undearned. Diligence and humility is the way to thrive in the riches of the understanding, as well as in gold or silver. Search carefully for the evidence of truth, and

dig for wisdom as for hid treasure.

Search with a steady honesty of soul, and a sincere impartiality to find the truth. Watch against every temptation that might bribe your judgment, or warp it aside from truth. Do not indulge yourself to wish any unexamined proposition were true or false. A wish often perverts the judgment, and tempts the mind strangely to believe upon slight evidence whatsoever we wish to be false.

V. Direct. Since the evidence of the agreement or disagreement of two ideas is the ground of our assent to any proposition, or the great criterion of truth; therefore we should suspend our judgment, and neither

affirm nor deny till this evidence appear.

This direction is different from the second; for though the evidence of the agreement or disagreement of two ideas most times depends on the clearness and distinctness of the ideas themselves, yet it does not arise thence. . Testimony may be a sufficient evidence of the agreement or disagreement of two obscure ideas, as we have seen just before in the exception under the second direction. Therefore, though we are not univerfally, and in all cases bound to suspend our judgment till our ideas of the objects themselves are clear and distinct, yet we mult alway suspend our judgment, and withhold our affent to or denial of any proposition, till some just evidence appear of its truth or falshood. It is an impatience of doubt and suspense, a rash ness and precipitance of judgment, and hastiness to believe something on one fide or the other, that plunges us into many errors.

This direction to delay and suspend our assent is more particularly necessary to be observed when such propositions offer themselves to us as are supported by education, authority, custom, inclination. interest, or other

II.

in-

OF

and

im-

ery

arp

with

with

nind

we

t or

lent uth;

ther

ugh

two

nct-

nce.

nent

feen

ion.

all

is of

nult

Tent

lence

e of

e of

one

it is

fuch

l by

, 01

ther

other powerful prejudices; for our judgment is led away intentibly to believe all that they dictate: and where prejudices and dangers of error are multiplied, we should set the stricter guard upon our affent.

Yet remember the caution or limitation here which I gave under the first direction (viz.) that this is not to be too strictly applied to matters of daily practice, either in human life or religion; but when we consider ourselves as philosophers, or searchers after truth, we should always with-hold our assent where there is not just evidence: and as far and as fast as we can in a due consistence with our daily necessary duties, we should also reform and adjust all our principles and practices both in religion and the civil life by these rules.

VI. Direct. We must judge of every proposition by those proper and peculiar mediums or means, whereby the evidence of it is to be obtained, whether it be sense, consciousness, intelligence, reason, or testimony. All our faculties and powers are to be employed in judging of their proper objects.

If we judge of found, colours, odours, sapors, the smoothness, roughness, softness, or hardness of bodies, it must be done by the use of our senses: but then we must take heed that our senses are well disposed, as

shall be shewn afterward.

And fince our fenses in their various excercises are in some cases liable to be deceived, and more especially when by our eyes or ears we judge of the figure, quantity, distance, and position of objects that are afar off, we ought to call our reason into the assistance of our senses, and correct the errors of one sense by the help of another.

It is by the powers of fense and reason joined together, that we must judge philosophically of the inward nature, the secret properties and powers, the causes and essentially of a thousand corporeal objects which surround us on earth, or are plac-

T

100

mo

gre

tio

leć

to

me

the

fin

fho

on

Tu

the

ati

be

his

ha: by

tin

fon

ato

to

tto

th

ed at a distance in the heavens. If a man on the one hand confines himself only to sensible experiments, and does not exercise reason upon them, he may surprise himselfand others with strange appearances, and learn to entertain the world with fights and shews, but will never become a philosopher: and on the other hand, if a man imprison himself in his closet, and employ the most exquisite powers of reason to find out the nature of things in the corporeal world, without the use of his senses, and the practice of experiments, he will frame to himself a scheme of chimeras instead of true philosophy. Hence came the invention of substantial forms and qualities, of materia prima and privation, with all the infignificant names used by the peripatetick writers; and it was for want of more experiments that the great Descartes failed in several parts of his philosophical writings.

In the abstracted and speculative parts of the mathematicks, which treat of quantity and number, the saculty of reason must be chiefly employed to perceive the relation of various qualities, and draw certain and useful conclusions; but it wants the affishance of sense also to be acquainted with lines, angles, and figures. And in practical mathematicks our senses have still

greater employment.

If we would judge of the pure properties, and actions of the mind, of the nature of spirits, their various perceptions and powers, we must not enquire of our eyes and our ears, nor the images or shapes laid in the brain, but we must have recourse to our own conscious-

nels of what passes within our mind.

If we are to passa judgment upon any thing that relates to spirits, in a state of union with animal nature, and the mixt properties of sensation, fancy, appetite, passion, pleasure, and pain, which arise thence, we must consult our own sensations, and the other powers which we find in ourselves considered as men or creatures, made up of a mind and an animal, and by just reasonings deduce proper consequences, and improve our knowledge in these subjects. II.

ne

ind

rife arn

will, if

the

ure

his

me

lo-

rms

all

rs;

ical

be-

fa-

the

ne

es.

ons

er-

yes the

uf-

e-

res

ites

uit

ch

rat.

gs. W-

If'

If we have occasion to judge concerning matters done in past ages, or in distant countries, and where we ourselves cannot be present, the powers of sense and reason, for the most part, are not sufficient to inform us; and we must therefore have recourse to the testimony of others: and this is either divine or human.

In matters of mere human prudence, we shall find the greatest advantage by making wise observations on our own conduct, and the conduct of others, and a survey of the events attending such conduct. Experience in this case is equal to a natural sagacity, or rather superior. A treasure of observations and experiences collected by wise men, is of admirable service here. And perhaps there is nothing in the world of this kind equal to the sacred book of Proverbs, even if we look on it as mere human writing.

In questions of natural religion, we must exercise the faculty of reason which God has given us; and since he has been pleased to afford us his word, we should confirm and improve, or correct our reasonings on this subject by the divine affistance of the bible.

In matters of revealed religion, that is, Christianity, Judaism, &c. which we could never have known by the light of nature, the word of God is our only foundation and chiefest light; though here our reason must be used both to find out the true meaning of God in his word, and to derive just inferences from what God has written, as well as to judge of the credentials whereby divine testimony is distinguished from mere human testimony, or from imposture.

As divine revelation can never contradict right reafor, (for they are two great lights given us by our Creator for our conduct); so reason ought by no means to assume to itself a power to contradict divine revela-

tion.

Though revelation be not contrary to reason, yet there are four classes wherein matters of revelation may be said to rise above, or go beyond our reason.

1. When revelation afferts two things of which we have clear

wi

du

ca

ju

Hu

life

be

ma

mo

be

pla

bo

lov

tici

pro

gre

eft

WO

mi

ma

evi

to

hav

Cha

clear ideas to be joined, whose connection or agreement is not discovered by reason; as when scripture informs us that the dead, shall rise, that the earth shall be burnt up, and the Man Christ Fesus shall return from heaven; none of these things could ever be found out or proved

by reason.

2. When revelation affirms any proposition, while reason has no clear and distinct ideas of the subject, or of the predicate; as God created all things by Jesus Christ: By the Urim and Thummim God gave forth divine Oracles. The predicate of each of these propositions is to us an obscure idea, for we know not what was the peculiar agency of Jesus Christ, when God the Father created the world by him; nor have we any clear and certain conception what the Urim and Thummim were, nor how God gave answers to his people by them.

3. When revelation, in plain and express language, declares some doctrine which our reason, at present, knows not with evidence and certainty, how ar in what sense to reconcile to some of its own principles; as that the child fesus is the mighty Gad, Isa. ix. 6. which proposition carries a seeming opposition to the unity and spirituality of the Godhhead, which are principles of reason.

4. When two propositions or dostrines are plainly offerted by divine revelation, which our reason at present knows not how or in what sense with evidence and certainty to reconcile with one another; as, the Father is the only true God, John xvii. 3. and yet Christ is over all,

God bleffed for ever, Rom. ix. 5.

Now, divine revelation having declared all these propositions, reason is bound to receive them, because it cannot prove them to be utterly inconsistent or impossible, though the ideas of them may be obscure, though we ourselves see not the rational connexion of them, and though we know not certainly how to reconcile them. In these cases reason must submit to faith; that is, we are bound to believe what Gad asserts, and waittilk he

15

us

up,

en;

bile

00

fus

rth

-00

hat

the

iny

m-

by

ige,

rus

ne:

the

ro-

and

of

af-

lent:

in-

the

all

ro-

it

ffi-

igh

m,

hat

tilk

he

he shall clear up that which seems dark and difficult, and till the mysteries of faith shall be farther explained to us either in this world or in the world to come\*, and reason itself dictates this submission.

VII. Direction. It is very useful to have some general principles of truth settled in the mind, whose evidence is great and obvious, that they may be always ready at hand to assist us in judging of the great variety of things which occur. These may be called first notions, or fundamental principles; for though many of them are deduced from each other, yet most or all of them may be called principles when compared with a thousand other judgments which we form under the regulation and influence of these propositions.

Every art and science, as well as the affairs of civil life and religion, have peculiar principles of this kind belonging to them. There are metaphysical, physical, mathematical, political, acconomical, medicinal, theological, moral and prudential principles of judgment. It would be too tedious to give a specimen of them all in this place. Those, which are of most universal use to us, both as men and as Christians, may be found in the following chapter, among the rules of judgment about par-

ticular objects.

VIII. Direction. Let the degrees of your assent to every proposition bear an exact proportion to the different degrees of evidence. Remember this is one of the greatest principles of wisdom that man can arrive at in this world, and the best human security against dangerous mistakes in speculation or practice.

In the nature of things, of which our knowledge is made up, there is infinite variety in their degrees of evidence.—And as God hath given our minds a power to suspend their assent till the evidence be plain, so we have a power to receive things which are proposed to

\* See something more on this subject, Direct. II. preceding, and Chop. V. Sect. 6.

us with a stronger or weaker belief, in infinite variety of degrees proportionable to their evidence, I believe that the Planets are inhabited; and I believe that the earth rolls among them yearly round the sun: but I do not believe both these propositions with an equal firmness of assent, because the arguments for the latter are drawn from mathematical observations; but the arguments for the former are but probable conjectures and moral reasonings. Yet neither do I believe either of these propositions so firmly, as I do that the earth is about twenty four thousand miles round, because the mathematical proof of this is much easier, plainer, and stronger. And yet farther, when I say that the earth was created by the prover of God, I have still a more infallible assurance of this than all the rest, because reason and scripture join to assure me of it.

IX. Direct. Keep your mind always open to receive truth, and never set limits to your own improvements. Be always ready to hear what may be objected even against your favourite opinions, and those which have had longest possession of your assent. And if there should be any new and uncontroulable evidence brought against these old or beloved sentiments, do not wink your eyes fast against the light, but part with any thing for the sake of truth: remember when you overcome an error you gain truth; the victory is on your side, and the advantage is all your own.

I confess those grand principles of belief and practice which universally influence our conduct both with regard to this life and the life to come, should be supposed to be well settled in the first years of our studies, such as, the existence and providence of God, the truth of Christianity, the authority of Scripture, the general rules of morality, &c. We should avoid a light fluttering genius, ever ready to change our soundations, and to be carried about with every wind of dostrine. To guard against which inconvenience, we should labour, with earnest diligence and servent prayer, that our most fundamental

II.

ety

eve

the

at L

ual

tter

ar-

and

of

the and arth nore ause

eive nts. ven

ave

nce

do

vith.

you

on

ac-

vith

up-

ies,

eral eral er-

To

ur, oft fundamental and important points of belief and practice may be established upon just ground of reason and scripture, when we come to years of discretion, and sit to judge for ourselves in such important points. Yet since it is possible that the folly or prejudices of younger years may have established persons in some mistaken sentiments, even in very important matters, we should always hold ourselves ready to receive any new advantage toward the correction, or improvement, even of our established principles, as well as opinions of lesser moment.

#### CHAP. V.

Special Rules to direct us in judging of particular Objects.

IT would be endless to run through all those particular objects concerning which we have occasion to pass a judgment at one time or another. Things of the most frequent occurrence, of the widest extent, and of the greatest importance, are the objects and exercises of sense, of reason, and speculation; the matters of morality, religion, and prudence; of human and divine testimony; together with the essays of reasoning upon things past and future. Special rules relating to all these will be the subject of the following sections.

donog and to valid week on ad those winds

givine reveloped by throng voices.

SECT. I.

#### SECT. I.

Principles and Rules of Judgment concerning the Objects of Sense.

Hough our fenses are sometimes liable to be deceived, yet when they are rightly disposed, and fitly exercised about their proper objects, with the just affishance of reason, they give us sufficient evidence of truth.

This may be proved by an argument drawn from the wisdom, goodness, and faithfulness of God our Creator. It was he gave us our senses; and he would not make us of such a constitution as to be liable to perpetual deception and unavoidable error in using these faculties of sense in the best manner we are capable of, about these very things which are the proper objects of them.

This may be proved also by the ill consequences that would follow from the supposition of the contrary. If we could have no certainty of the dictates of our senses, we could never be sure of any of the common affairs and occurrences of life. Men could not transact any of their civil or mural concerns with any certainty or justice; nor indeed could we eat or drink, walk or move, with safety. Our senses direct us in all these.

Again, the matters of religion depend, in some meafure, upon the certainty of the dictates of sense; for faith comes by hearing: and it is to our senses that God appeals in working miracles to prove his own revelation. Now, if when our eyes and ears, and other organs of sense are rightly disposed and exercised about their proper objects, they were always liable to be deceived, there could be no knowledge of the gospel, no proof of divine revelation by visions, voices, or miracles.

Our

75

d

ft

of

n

er

ld

0

g

e

S

rt

5

Y

F

r

r

n

b

I

)

Our senses will discover things near us and round about us, which are necessary for our present state with sufficient exactness, and things distant also, as far as

they relate to our necessary use of them.

Nor is there need of any more accurate rules for the use of our senses in the judgment of all the common affairs of life, or even of miraculous and divine operations, than the vulgar part of mankind are sufficiently acquainted with by nature, and by their own daily observations.

But if we would express these rules in a more exact manner, how to judge by the distates of our senses, they

should be represented thus:

I. We must take care that the organs of our sense be rightly disposed, and not under the power of any distemper or considerable decay; as for instance, that our eyes are not tinctured with the jaundice, when we would judge of colours, lest we pronounce them all yellow: that our hands are not burning in a fever, or benumbed with frost or the palsy, when we would judge of the heat or coldness of any object: that our palate be not viciated by any disease, or by some other improper taste of any solid or liquid. This direction relates to all our senses; but the following rules chiefly refer to our sight.

2. We must observe whether the object be at a proper distance; for, if it be too near or too far off, our eyes will not sufficiently distinguish many things which are properly the objects of sight; and therefore, if possible, we must make nearer approaches to the object, or remove farther from it till we have obtained that due distance which give us the clearest perception.

3. We must not employ our fight to take a full survey at once of objects that are too large for it; but we must view them by parts, and then judge of the whole; nor must our senses judge of objects too small; for some things which appear through glasses to be really and distinctly existent, are either utterly invisible, or greatly consused when we would judge of them by the naked eye.

4. We

4. We must place ourselves in such a position toward the object, or place the object in such a position toward our eye, as may give us the clearest representation of it; for a different position greatly alters the appearance of the shape of bodies. And for this reason we should change the position both of the eye and the object in some cases, that by viewing the object in several appearances we may pass a more complete and certain judgment concerning it.

5. We must consider what the medium is by which objects are represented to our senses; whether it be air, or vapour, or water, or glass, &c. whether it be duly enlightened or dusky: whether it restect or restract, or only transmit the appearance of the object; and whether it be tinctured with any particular colour; whether it

be moving or at rest.

6. We must sometimes use other helps to assist our senses; and if we make use of glasses, we must make all just allowances for the thickness or thinness of them, for the clearness or dullness, for the smoothness or roughness, for the plainness, the convexity or concavity of them, and for the distance at which these glasses are placed from the eye, or from the object, (or from one another, if there be two or more glasses used) and all this according to the rules of art. The same fort of caution should be used also in mediums which assist the hearing, such as speaking-trumpets, hearing-trumpets, &c.

7. If the object may be proposed to more senses than one, let us call in the assistance of some other senses to examine it, and this will increase the evidence of what one sense dictates; Ex. gr. Our ear may assist our eye in judging of the distant bodies, which are both visible and sonorous, as an exploded cannon, or a cloud charged with thunder. Our feeling may assist our sight in judging of the kind, the shape, situation, or distance, of bodies that are near at hand, as whether a garment be silk or stuff, &c. So, if I both see, hear, and embrace my friend, I am sure he is present.

8. We.

in

e>

I.

rd

rd

of

CE.

ld

in

rg-

ch

ir,
ily

er

it

ur

ke

n,

or

a.

es

m

nd

of

ift

n=

an

to

at

ye

th

ud

ht

ey

nt

ce

Te.

8. We should also make feveral trials, at some distant times, and in different circumstances, comparing former experiments with latter, and our own observations with those of other persons.

It is by such methods as these that modern philosophy has been so greatly improved by the use of sensible ex-

periments.

#### SECT. II.

Principles and Rules of Judgment in Matters of Reason and Speculation.

IT is by reason we judge both in matters of speculation and practice: there are peculiar rules which relate to things practical, whether they be matters of religion, morality, or prudence, yet many things in this section, may be applied to practical enquiries and matters of saith, though it chiefly relates to knowledge or speculations of reason.

1. Whatfoever clear ideas we can join together without inconfistency, are to be counted possible, because almighty power can make whatfoever we can conceive...

2. From the mere possibility of a thing we cannot infer its actual existence; nor from the non-existence of

it can we infer its impossibility.

Note, The idea of God seems to claim an exemption from this general rule; for if he be possible, he certainly exists, because the very idea includes eternity, and he cannot begin to be: if he exist not, he is impossible,

for the very fame reason.

3. Whatsoever is evidently contained in the idea of any thing, may be affirmed of that thing with certainty. Reason is contained in the idea of a man; and existence is contained in the idea of God; and therefore we may affirm God exists, and man is reasonable.

4. It

f

ſ

0

d

il

d

k

4. It is impossible that the same thing should be, and not be at the same time, and in the same respect. Thence it sollows, that two contradictory ideas cannot be joined in the same part of the same subject, at the same time, and in the same respects: or that two contradictory propositions can never be both true.

5. The more we converse with any subject in its various properties, the better knowledge of it, we are likely to attain; and by frequent and repeated enquiries and experiments, reasonings and conversations about it, we confirm our true judgments of that thing, and correct former mistakes.

6. Yet after our utmost enquiries, we can never be assured by reason, that we know all the powers and properties of any finite being.

7. If finite beings are not adequately known by us, much less the things infinite: for it is of the nature of a finite mind not to be able to comprehend what is infinite.

8. We may judge and argue very justly and certainly concerning infinites, in some parts of them, or so far as our ideas reach, though the infinity of them hath something incomprehensible in it. And this is built on the general rule following, viz.

9. Whatsoever is sufficiently clear and evident ought not to be denied, though there are other things belonging to the same subject, which cannot be comprehended. I may affirm many things with certainty concerning human souls, their union with bodies, concerning the divisibility of matter, and the attributes of God though many other things relating to them are darkness to us.

nents, or equal arguments for and against it, we must remain in perfect suspense about it till convincing evidence appear on one side.

11. Where present necessity of action does not constrain us to determine, we should not immediately yield up our assent to mere probable argument, without II.

and

ect.

mot

the

ra-

its

are

ted

er-

of-

be

nd

us,

of

18

n-

ar

th

nc

ht

-9

1-

y

1-

of

e

a due reserve, if we have any reasonable hope of obtaining greater light and evidence on one side or the other: for when the balance of the judgment once resigns its equilibrium, or neutrality, to a mere probable argument, it is too ready to settle itself on that side, so that the mind will not easily change that judgment, though bright and strong evidence appear afterwards on the other side.

12. Of two opinions, if one has unanswerable difficulties attending it, we must not reject it immediately, till we examine whether the contrary opinion has not

difficulties as unanswerable.

13. If each opinion has objections against it, which we cannot answer, or reconcile, we should rather embrace that which has the least difficulties in it, and which has the best arguments to support it: and let our affent bear proportion to the superior evidence.

14. If any doctrine hath very strong and sufficient light and evidence to command our assent, we should not reject it because there is an objection or two against it which we are not able to answer: for, upon this foot a common Christian would be bassled out of every article of his faith, and must renounce even the dictates of his reason and his senses; and the most learned man perhaps would hold but very sew of them sast: for some objections which attend the sacred doctrine of the eternity and the omnipresence of God, and the philosophical doctrines of light, atoms, space, motion, &c. are hardly solvable to this day.

15. Where two extremes are proposed, either in matters of speculation or practice, and neither of them have certain and convincing evidence, it is generally safest to take the middle way. Moderation is more likely to come near the truth than doubtful extremes. This is an excellent rule to judge of the characters and value of the greatest part of persons and things; for nature seldom deals in superlatives. It is a good rule also by which to form our judgment in many specula-

t

1

b

tive controverses; a reconciling medium in such cases

does often best secure truth as well as peace.

and copent evidence, and do not plainly appear inconfishent, we may believe both of them, though we cannot at present see the way to reconcile them. Reason, as well as our own consciousness assures us, that the will of man is free, and that multitudes of human actions are in that respect contingent; and yet reason and scripture assures us, that God foreknows them all, and this implies a certain fatality. Now, though learned men have not to this day hit on any so clear and happy method as is fit to reconcile these propositions, yet since we do not see a plain inconsistency in them, we justly believe them both, because their evidence is great.

difficult matters, that two things are utterly inconsistent, for there are many propositions which may appear inconsistent at first, and yet afterwards we find their consistency, and the way of reconciling them may be made plain and easy: as also, there are other propositions, which may appear consistent at first. but after

due examination we find their inconsistency.

18. For the same reason we should not call those difficulties utterly *insolvable*, or those objections unanswers, which we are not presently able to answer:

time and diligence may give farther light.

we should not be too frequent or hasty in afferting the certain consistency or inconsistency, the absolute universality, necessity or impossibility of things, where there is not the brightest evidence. He is but a young and raw philosopher, who when he sees two particular ideas evidently agree, immediately afferts them to agree universally, to agree necessarily, and that it is impossible it should be otherwise: or when he sees evidently that two particular ideas happen to disagree, he presently afferts their constant and natural inconsistency, their utter

t II.

cases

rong

con-

nnot

, as

will

s are

ture

im-

have

hod

e do

ieve

in

fift-

ap-

find

nay

po-

fter

ofe

an-

er:

ror

he

lu-

is

nd

eas

71-

it

vo

f-

t-

er

ter impossibility of agreement, and calls every thing conmary to his own opinion absurdity and nonsense. A true philosopher will affirm or deny with much caution or modesty, unless he has thoroughly examined and sound the evidence of every part of his affertion exceeding plain.

20. Let us have a care of building our affurance of any important point of doctrine upon one fingle argument, if there are more to be obtained. We should not slight and reject all other arguments which support the same doctrine, lest if our favourite argument should be refuted, and sail us, we should be tempted to abandon that important principle of truth. I think this was a very culpable practice in Descartes, and some of his followers, who when he had found out the arguments, for the existence of God, derived from the idea of a most perfect and self-existent being, he seemed to despise and abandon all other arguments against atheism.

21. If we happen to have our chief arguments for any opinion refuted, we should not immediately give up the opinion itself; for, perhaps, it may be a truth still, and we may find it to be justly supported by other arguments, which we might once think weaker, or perhaps

by new arguments which we knew not before.

22. We ought to esteem that to be sufficient evidence of a proposition, where both the kind and the force of the arguments or proofs are as great as the nature of the thing admits, and as the necessity and exigence of the case requires. So if we have a credible and certain testimony that Christ arose from the dead, it is enough; we are not to expect mathematical or occular demonstration for it, at least in our day.

23. Though we should seek what proofs may be attained of any proposition, and we should receive any number of arguments which are just and evident for the confirmation of the same truth, yet we must not judge of the truth of any proposition by the number of arguments which are brought to support t, but by the V 2

ple

ple

pin

rea

it, tel to

mo it

0119

ed

da

a (

bo

ap

to

ha

m

fu

mi

10

an

m

ne

in

strength and weight of them: a building will stand firm and longer on four large pillars of marble, than

on ten of fand, or earth, or timber.

or expected, a considerable number of probable arguments, carry great weight with them even in matters of speculation. That is a probable hypothesis, in physosophy or in theology, which goes farthest towards the solution of many difficult questions arising on any subject.

# SECT. III.

Principles and Rules of Judgment in matters of Morality and Religion.

TERE it may be proper, in the first place, to mention a few definitions of words or terms.

By matters of morality and religion, I mean those things which relate to our duty to God, ourselves, or our fellow creatures.

Moral good or virtue, or holiness, is an action or temper conformable to the rule of our duty. Moral evil, or vice, or sin, is an action or temper unconformable to the rule of our duty, or a neglect to fulfil it.

Note, The words vice or virtue chiefly imply the relation of our actions to men and this world: fin and holiness rather imply their relation to God and the other world.

Natural good is that which gives us pleasure or satisfaction. Natural evil is that which gives us pain or grief.

Happiness consists in the attainment of the highest and most lasting natural good. Misery consists in suffering the highest and most lasting natural evil; that is in short, beaven or bell.

Though

II.

and

nan

ind

211-

of

phy

ion

ity

n-

se

or

OF

al

1-

ie.

d

ie

r

1

t

Though this be a just account of perfect happiness and perfect misery, yet wheresoever pain overbalances pleasure, there is a degree of misery; and wheresoever pleasure overbalances pain, there is a degree of happiness.

I proceed now to lay down some principles and rules

of judgment in matters of morality and religion.

1. The will of our maker, whether discovered by reason or revelation, carries the highest authority with it, and is therefore the highest rule of duty to intelligent creatures; a conformity or non-conformity to it determines their actions to be moral good or evil.

2. Whatfoever is really an immediate duty toward ourselves, or toward our fellow creatures, is more remotely a duty to God; and therefore in the practice of it we should have an eye to the will of God as our

rule and to his glory as our end.

3. Our wise and gracious Creator has closely united our duty and our happiness together; and has connected sin, or vice, and punishment; that is, he has ordained that the highest natural good and evil should have a close connexion with moral good and evil, and that both in the nature of things, and by his own positive appointment.

4. Conscience should seek due information in order to determine what is duty, and what is sin, because

happiness and misery depend upon it.

5. On this account our inclination to present temporal good, and our aversion to present temporal evil, must be wisely overbalanced by the consideration of future und eternal good or evil, that is, happiness or misery. And for this reason we should not omit a duty or commit a sin, to gain any temporal good, or to avoid any temporal evil.

6. Though our natural reason, in a state of innocence, might be sufficient to find out those duties which were necessary for an innocent creature, in order to abide in the savour of his Maker; yet, in a fallen state, our

 $V_3$ 

natural

natural reason is by no means sufficient to find out all that is necessary to restore a sinful creature to the divine favour.

7. Therefore God hath condescended, in various ages of mankind, to reveal to sinful men what he requires of them in order to their restoration, and has appointed in his word some peculiar matters of faith and practice, in order to their salvation. This is called revealed religion, as the things knowable concerning God, and our duty by the light of nature, are called

natural religion.

8. There are also many parts of morality, and natural religion, or many natural duties relating to God, to ourselves, and to our neighbours, which would be exceeding difficult and tedious for the bulk of mankind to find out, and determine by natural reason; therefore it has pleased God, in this sacred book of divine revelation, to express the most necessary duties of this kind in a very plain and easy manner, and made them intelligible to souls of the lowest capacity; or they may be stry easily derived thence by the use of reason.

and more important than others are, so every duty requires our application to understand and practise it in

proportion to its necessity and importance.

ro. Where two duties feem to stand in opposition to each other, and we cannot practise both, the less must give way to the greater, and the omission of the less is not sinful. So ceremoniallanus give way to moral: God

will have mercy, and not facrifice.

the different degrees of their necessity and importance by reason, according to their greater or more apparent tendency to the honour of God and the good of men: but in matters of revealed religion, it is only divine revelation can certainly inform us what is most necessary and most important; yet we may be assisted also in that fearch by the exercise of reason.

12. 1

y

l

V

0

U

V

II.

all

vine

ions

re-

ap-

and

lled

ning

lled

and

od,

ind

ore

eve-

ind

tel-

be

ary

re-

in

to

is od

of

ent

n:

re-

ry

lat

In

12. In actions wherein there may be fome scruple about the duty or lawfulness of them, we should chuse always the safest side, and abstain, as far as we can, from the practice of things whose lawfulness we suspect.

13. Points of the greatest importance in human life, or in religion, are generally the most evident, both in the nature of things, and in the word of God; and where points of faith or practice are exceeding difficult to find out, they cannot be exceeding important. This proposition may be proved by the goodness and faithfulness of God, as well as by experience and observation.

14. In some of the outward practices and forms of religion, as well as human affairs, there is frequently a present necessity of speedy action, one way or another: in such a case, having surveyed arguments on both sides, as far as our time and circumstances admit, we must guide our practice by those reasons which appear most probable, and seem at that time to overbalance the rest: yet always reserving room to admit farther light and evidence, when such occurrences return again. It is a preponderation of circumstantial arguments that must determine our actions in a thousand occurrences.

ments, where the matter is of small consequence, and would not answer the trouble of seeking after certainty. Life and time are more precious than to have a large share of them laid out in scrupulous enquiries, whether smoothing tobacco, or wearing a periwig, be law-

ful or no.

16. In affairs of greater importance, and which may have a long, lasting, and extensive influence on our future conduct or happiness, we should not take up with probabilities, if certainty may be attained. Where there is any doubt on the mind, in such cases, we should call in the affistance of all manner of circumstances, reason, motives, consequences on all sides: We must wait longer, and with earnest request seek human

pur

wh

it b Th ma

tog has

wh

mir

mr

like

mei

act be i

hol

onl der

tha

tagi

atta be

wh

less

tha

in

our

thir

and

and

human and divine advice before we fully determine our judgment and our practice, according to the old Roman fentence, Quot flatuendum est semel, deliberandum est diu. We should be long in considering what we must determine once for all.

#### SECT. IV.

Principles and Rules of Judgment in masters of human Prudence.

THE great design of prudence, as distinct from morality and religion, is to determine and manage every affair with decency, and to the best advantage.

This is decent, which is agreeable to our state, condition, or circumstances, whether it be in behaviour,

discourse or action.

That is advantageous which attains the most and best purposes, and avoids the most and greatest inconveniences.

As there is infinite variety in the circumstances of persons, things, actions, times, and places, so we must be furnished with such general rules as are accommodable to all this variety by a wise judgment and discretion: For, what is an act of consummate prudence in some times, places, and circumstances, would be consummate folly in others. Now, these rules may be ranged in the following manner:

1. Our regard to persons or things should be governed by the degrees of concernment we have with them, the relation we have to them, or the expectation we have from them. These should be the measures by which we should proportion our diligence and appli-

cation in any thing that relates to them.

2. We

I.

11

m

11.

r-

17:

,

i

2. We should always consider whether the thing we pursue be attainable, whether it be worthy our pursuit; whether it be worthy the degree of pursuit; whether it be worthy of the means used in order to attain it. This rule is necessary, both in matters of knowledge and matters of practice.

3. When the advantages and disadvantages, conveniences and inconveniences of any action are balanced together, we must finally determine on that side which has the superior weight; and the sooner in things which are necessarily and speedily to be done or deter-

mined.

4. If advantages and disadvantages in their own name are equal, then those which are most certain, or likely as to the event, should turn the scale of our judg-

ment, and determine our practice.

3. Where the improbabilities of fuccess or advantage are greater than the probabilities, it is not prudence to act or venture. It is proper to enquire whether this benot the case in almost all lotteries: for they that hold stakes will certainly secure part to themselves; and only the remainder being divided into prizes must render the improbability of gain to each adventurer greater than the probability.

6. We should not despise or neglect any real advantage, and abandon the pursuit of it, though we cannot attain all the advantages that we desire. This would be to act like children, who are fond of something which strikes their fancy most, and sullen and regardless of every thing else, if they are not humoured in

that fancy.

7. Though a general knowledge of things be useful, in science and in human life; yet we should content ourselves with a more superficial knowledge of those things which have the least relation to our chief end and design.

8. This rule holds good also in matters of business and practice, as well as in matters of knowledge; and therefore

Pi

1

exi

bo

de

for

tl.

W

WC

Ca

ka

fuc

25

1. €

itte

eve

the

the

cor

ma

tef

ind

nic

therefore we should not grasp at every thing, less in the end we attain nothing. Persons that either by an inconstancy of temper, or by a vain ambition, will pursue every sort of art and science, study and business, seldom grow excellent in any one of them: And projectors, who form twenty schemes, seldom use sufficient application to sinish one of them, or make it turn to good account.

9. Take heed of delaying and trifling amongst the means instead of reaching at the end. Take heed of wasting a life in mere speculative studies, which is called to action and employment: Dwell not too long in philosophical, mathematical, or grammatical parts of learning, when your chief design is law, physic, or divinity. Do not spend the day in gathering slowers by the way side, lest night come upon you before you arrive at your journey's end, and then you will not reach it.

no. Where the case and circumstances of wise and good men resemble our own case and circumstances, we may borrow a great deal of instruction toward our prudent conduct from their example, as well as in all cases we may learn much from their conversation and advice.

II. After all other rules remember this, that mere speculation in matters of buman prudence can never be a perfect director without experience and observation. We may be content therefore in our younger years to commit some unavoidable mistakes in point of prudence; and we shall see mistakes enough in the conduct of others, both which ought to be treasured up among our useful observations, in order to teach us better judgment for time to come. Sometimes the mistakes, imprudences, and follies, which ourselves or others have been guilty of, give us brighter and more effectual lessons of prudence, than the wisest councils, and the fairest examples; could ever have done.

M. PERSONAL PROPERTY.

#### SECT. V.

Principles and Rules of judgment in matters of human Testimony.

THE evidence of human testimony is not so proper to lead us into the knowledge of the essence and inward nature of things as to acquaint us with the existence of things, and to inform us of matters of sact both past and present. And though there be a great deal of fallibility in the testimony of men, yet there are some things we may be almost as certain of, as that thesun shines, or that sive twenties make an hundred. Who is there at London that knows any thing of the world, but believes there is such a city as Paris in France; that the Pope dwells at Rome; that Julius Casar was an Emperor; or that Luther had a great hand in the Reformation?

If we observe the following rules, we may arrive at such a certainty in many things of human testimony, as that it is morally impossible we should be deceived,

i.e. we obtain a moral certainty.

1. Let us consider, whether the thing reported be in itself possible; if not, it can never be credible, whosoever relates it.

2. Consider farther, whether it be probable, whether there are any concurring circumstances to prove it beside the mere testimony of the person that relates it. I consess, if these last conditions are wanting, the thing may be true, but then it ought to have the stronger testimony to support it.

3. Consider whether the person who relates it be appable of knowing the truth: whether he be a skilful judge in such matters, if it be a business of art, and a nice appearance in nature, or some curious experiment

in

the d of calg in of

II.

the in-

rsue dom

pli-

boo

you not

or

may lent we

be a We om-

ong ong etter kes,

ners nore cils,

CT.

t

tl

21

th

te

41

th

to

10

p0

w

no by

ha

ma

we

ma

mo of

me

mu

pre

to dul

the

in per

hav

are

fen

for

in philosophy. But if it be a mere occurence in life, a plain, sensible matter of fact, it is enough to enquire whether he who relates it were an eye or ear witness; or whether he himself had it only by hear-say, or can

trace it up to the original.

4. Consider whether the narrator be honest and faith ful, as well as skilful: whether he hath no biass upon his mind, no peculiar gain or profit by believing or reporting it, no interest or principle which might warp his own belief aside from truth, or which might tempt him to prevaricate, to speak falsly, or to give a representation a little different from the naked truth of things; in short, where there be no occasion of suspicion con-

cerning his report.

5. Consider whether feveral persons agree together, in the report of this matter; and if so, then whether these persons, who joined together in their testimony, might not be supposed to combine together in a falshood. Whether they are persons of sufficient skill, probity, and credit. It might be also enquired, whether they are of different nations, sects, parties, opinions, or interests. For the more divided they are in all these, the more likely is the report to be true, if they agree together in their account of the same thing; and especially if they persist in it without wavering.

6. Consider farther, whether the report were capable of being early refuted at first, if it had not been true; if

fo, this confirms the testimony.

7. Enquire yet again, whether there has been a conflant, uniform tradition and belief of this matter from the very first age, or time when the thing was transacted, without any reasonable doubts or contradictions. Or,

8. If any part of it hath been doubted by any confiderable persons; whether it has been fearched out and afterwards confirmed, by having all the scruples and doubts removed. In either of these cases the testimony comes more firm and credible.

9. Enquire on the other hand, where there are any confi-

considerable objections remaining against the belief of that proposition so attested. Whether there be any thing very improbable in the thing itself. Whether any concurrent circumstances seem to oppose it. Whether any person or persons give a positive and plain testimony against it. Whether they are equally skilful. and equally faithful as those who affert it. Whether they be as many or more in number, and whether they might have any fecret biass or influence on them to contradict it.

10. Sometimes the entire silence of a thing may have fomething of weight towards the decision of a doubtful point of history, or a matter of human faith, (viz.) where the fact is pretended to be public, if the persons who are silent about it were skilful to observe, and could not but know fuch an occurrence; if they were engaged by principle or by interest to have declared it: if they had fair opportunity to speak of it: and these things may tend to make the matter fuspicious, if it be not well attested by positive proof.

11. Remember, that in some reports there are more marks of falsbood than of truth; and in others, there are more marks of truth than of falshood. By a comparison of all these things together, and putting every argument on one fide and the other into the balance, we must form as good a judgment as we can, which side preponderates; and give a strong or feeble affent or diffent, or withhold our judgment entirely, according to greater or leffer evidence, according to more plain or

dubious marks of truth or falshood.

12. Observe, that in matters of human testimony, there is oftentimes a great mixture of truth and falfbood in the report itself: Some parts of the story may be perfectly true, and some utterly false: and some may have fuch a blended confusion of circumstances, which are a little warpt aside from the truth, and misreprefented, that there is need of good skill and accuracy to form a judgment concerning them, and determine which

r re-Warp empt efenings;

con-

t II.

life.

quire

tnes:

r can

faith-

upon

ther, ether nony, bood. and

y are nter-, the togecially

pable e; if

conn the cted, Or. onfi-

and and nony

any onfi-

de

P

1 th

tel

th

25

fu

W

an

ha

tej th

ou re

fo

n

Ca

ft

it

th

part is true, and which is false. The auhole report is not to be believed, because some parts are indubitably true; nor the auhole to be rejected, because some parts are as evident falshoods.

We may draw two remarkable observations from this

Section.

Observ. I. How certain is the truth of the Christian religion, and particularly of the resurrection of Christ, which is a matter of fact on which Christianity is built? We have almost all the concurrent evidences that can be derived from human testimony, joining to confirm this glorious truth. The fact is not impossible; concurrent circumstances cast a favourable aspect on it; it was foretold by one who wrought miracles, and therefore not unlikely, nor unexpected: The apostles and first disciples were eye and ear-witnesses, for they conversed with their risen Lord; they were the most plain, honest men in themselves; the temptations of wordly interests did rather discourage their belief and report of it: They all agree in this matter, though they were men of different characters; Pharifees and Fishermen, and Publicans, men of Judæa and Galilee; and perhaps some Heathens, who were early converted: The thing might eafily have been disproved, if it were false; it hath been conveyed by constant tradition and writing down to our times; those who at first doubted, were afterwards convinced by certain proofs: nor have any pretended to give any proof of the contrary; but merely denied the fact with impudence, in opposition to all those evidences.

Observ. II. How weak is the faith which is due to a multitude of things in ancient human history! For, though many of these criteria, or marks of credibility are found plainly in the more general and public facts; yet as to a multitude of particular facts and circumstances, how desicient are they in such evidence as should demand

demand our affent! Perhaps there is nothing that ever was done in all past ages, and which was not a public fact fo well attested as the resurrection of Christ.

#### SECT. VI.

Principles and Rules of Judgment, in Matters of divine Testimony.

Shuman testimony acquaints us with matters of fact, both past and present, which lie beyond the reach of our own personal notice; so divine testimony is suited to inform us both of the nature of things, as well as matters of fact, and of things future; as well as present or past.

Whatfoever is dictated to us by God himfelf, or by men who are divinely inspired, must be believed with full affurance. Reason demands us to believe whatsoever divine Revelation dictates: For God is perfectly wise, and cannot be deceived; he is faithful and good, and will not deceive his creatures: And when reason has found out the certain marks or credentials of divine testimony to belong to any proposition, there remains then no farther enquiry to be made, but only to find out the true fense and meaning of that which God has revealed, for reason itself demands the belief of it.

Now, divine Testimony or Revelation, requires these

following credentials:

1. That the propositions or doctrines revealed be not inconfistent with reason; for intelligent creatures can never be bound to believe real inconsistencies. Therefore we are fure the popish doctrine of transubstantiation is not a matter of divine revelation, because itis contrary to all our fenses and our reason, even in their proper exercises.

God W 2

Hian brift, ilt? can

firm

II.

t is

tably

parts

this

con-; it iereand conlain,

rdly rt of were men, per-

The alfe; writted,

nave but n to

to a For, ility ets;

fan-

puld and

ful

or wi

w

Th

ter

cia

lat

per att

by

the

w

nel

We

riv

tra

fee

the

of

pe

pro

dis

fel

pro

cui

the

or Wi

im

of

fai

fpi

pe

God can dictate nothing but what is worthy of himfelf, and agreeable to his own nature and divine perfections. Now, many of these perfections are discoverable by the light of reason; and whatsoever is inconsistent with these perfections, cannot be a divine revelation.

But let it be noted, that in matters of practice towards our fellow-creatures, God may command us to act in a manner contrary to what reason would direct antecedent to that command. So Abraham was commanded to offer up his fon a facrifice; The Israelites were ordered to borrow of the Egyptians without paying them, and to plunder and flay the inhabitants of Canaan: Because God has a sovereign right to all things, and can with equity disposses his creatures of life, and every thing which he has given them, and especially such sinful creatures as mankind; and he can appoint whom he pleafes, to be the instruments of this just dispossession or deprivation. So that these divine commands are not really inconfistent with right reason; for whatfoever is fo, cannot be believed where that inconfiftency appears.

2. Upon the same account the whole doctrine of Revelation must be consistent with itself; every part of it must be consistent with each other: And though in points of practice, latter revelation may repeal or cancel former divine laws; yet in matters of belief, no latter revelation can be inconsistent with what has been hereto-

fore revealed.

3. Divine revelation must be confirmed by some divine and supernatural appearances, some extraordinary signs or tokens, visions, voices, or miracles wrought, or prophecies sulfilled. There must be some demonstrations of the presence and power of God, superior to all the powers of nature, or the settled connexion which God, as Creator, has established among his creatures in this visible world.

4. If there are any fuch extraordinary and wonder-

im-

er-

er-

on-

ve-

to-

s to

rect

om-

ites

ay-

of

all

of

and

can

his

ine

on;

111-

Re-

it

in

cel

ter

to-

di-

ry

or

ra-

all

ch

res

al

ful appearances and operations brought to contest with, or to oppose divine revelation, there must, and always will be such a superiority on the side of that revelation, which is truly divine, as to manifest that God is there. This was the case when the Egyptian sorcerers contended with Moses. But the wonders which Moses wrought, did so far transcend the power of the Magicians, as made them confess, It was the singer of God.

5. These divine appearances, or attestations to revelation, must be either known to ourselves, by our own personal observation of them, or they must be sufficiently attested by others, according to the principles and rules by which matters of human faith are to be judged in

the foregoing fection.

Some of those who lived in the nations and and ages where miracles were wrought, were eye and ear witnesses of the truth and divinity of the revelation; but we, who live in these distant ages, must have them derived down to us by just and incontestable history and tradition. We also, even in these distant times, may see the accomplishments of some ancient predictions, and thereby obtain that advantage toward the confirmation of our faith, in divine revelation, beyond what those persons enjoyed who lived when the predictions were pronounced.

6. There is another very considerable confirmation of divine testimony; and that is when the doctrines themselves, either on the publication or the belief of them produce supernatural effects. Such were the miraculous powers which were communicated to believers in the first ages of Christianity, the conversion of the Jews or Gentiles, the amazing success of the gospel of Christ, without human aid, and in opposition to a thousand impediments, its power in changing the hearts and lives of ignorant and vicious heathers, and wicked and profane creatures in all nations, and filling them with a spirit of virtue, piety, and goodness. Wheresoever persons have found this effect in their own hearts,

 $W_3$ 

C

al

el al

rı

n

92

te

fu

fr

h

hi

01

ca

CO

m

gi Wi

fo

wrought by a belief of the gospel of Christ, they have a witness in themselves of the truth of it, and abundant reason to believe it divine.

Of the difference between reason and revelation, and in what sense the latter is superior, see more in Chapter

II. Sect. 9. and Chap. IV. Direct. 6.

#### SECT. VII.

Principles and Rules of judging, concerning things past, present, and to come, by the mere Use of Reason.

Hough we attain the greatest assurances of things past and future, by divine faith, and learn many matters of fact, both past, and present, by uman faith; yet reason also may, in a good degree, assist us to judge of matters of fact both past, present, and to come, by the following principles.

1. There is a fystem of beings round about us, of which we ourselves are a part, which we call the world; and in this world there is a course of nature, or a settled order of causes, effects, antecedents, concomitants, consequences, &c. from which the author of nature doth not vary, but upon very important occasions.

2. Where antecedents, concomitants, and consequents, causes, and effects, signs and things signified, subjects and adjuncts are necessarily connected with each other, we may infer the causes from the effects, and effects from causes, the antecedents from the consequents, as well as consequents from antecedents, &c. and thereby be pretty certain of many things both past, present, and to come. It is by this principle that astronomers can tell what day and hour the sun and moon were eclipsed five hundred years ago, and predict all suture eclipses as long as the world shall stand. They can tell precisely at what minute the sun rises or sets this day at Pequin

in China, or what altitude the dog-star had at midnight or mid-noon in Rome, on the day when Julius
Cæsar was slain. Gardeners upon the same principle
can foretel the months when every plant will be in
bloom; and the ploughman knows the weeks of harvest.
We are sure, if there be a chicken, there was an egg:
if there be a rain-bow, we are certain it rains not far
off: if we behold a tree growing on the earth, we
know it has naturally a root under ground.

Where there is a necessary connection between causes and effects, antecedents and consequents, signs and things signified, we know also that like causes will have like effects; and proportionable causes will have proportionable effects contrary causes will have contrary effects; and observing men may form many judgments by the rules of similitude and proportion, where the causes,

effects, &c. are not entirely the same.

4. Where there is but a probable and uncertain connexion between antecedents, concomitants, and confequents, we can give but a conjecture, or a probable determination. If the clouds gather, or the weather-glass finks, we suppose it will rain: if a man spit blood frequently with coughing, we suppose his lungs are hurt: if very dangerous symptoms appear, we expect his death.

5. Where cases operate freely, with a liberty of indifference to this or the contrary, there we cannot certainly know what the effects will be; for it seems to be contingent, and the certain knowledge of it belongs only to God. This is the case in the greatest part of human actions.

6. Yet wise men, by a just observation in this matter also, concerning things past, or things future, because human nature in all ages and nations has such a conformity to itself. By a knowledge of the tempers of men, and their present circumstances, we may be able to give a happy guess what their conduct will be, and what will be the event, by an observation of the like cases in some times. This made the emperor Marcus Antoni-

nus,

aft,

II.

ave

ant

and

oter

ngs any th;

of ld; et-

ure uts, vels er, ets

as by nd an fed

as ly in

in

14

an

tr

nus, to say, "by looking back into history, and considering the fate and revolutions of governments, you will
be able to form a guefs, and almost prophesy upon the
future. For things past: present, and to come, are
frangely uniform, and of a colour; and are commonly
cast in the same mould. So that upon the matter, forty years of human life may serve for a sample of ten
thousand." Collier's Antoninus, book VII. sect. 50.

7, There are also some other principles of judging concerning the past actions of men in former ages, besides books, histories, and traditions, which are mediums of conveying human testimony: as we may infer the skill and magnificence of the ancients, by some fragments of their statues, and ruins of their buildings. We know what Roman legions came into Great Britain, by numbers of bricks dug out of the earth in some parts of the island, with the marks of some particular legion upon them, which must have been employed there in brick making. We rectify some mistakes in history by statues, coins, old altars, utensils of war, &c. We consirm or disprove some pretended traditions and historical writings, by medals, images, pictures, urns, &c.

Thus I have gone through all those particular objects of our judgment which I first proposed, and have laid down principles and rules by which we may safely conduct ourselves therein.—There is a variety of other objects concerning which we are occasionally called to pass a judgment, viz. The characters of persons the value and worth of things, the sense and meaning of particular writers, matters of wit, oratory, poesy, matters of equity in judicial courts, matters of traffick and commerce between man and man, which would be endless to enumerate. But if the general and special rules of judgment, which have been mentioned in these two last chapters, are treasured up in the mind, and wrought into the very temper of our souls in our younger years, they will lay a foundation for just and regular judgment concerning a thousand special occurrences in the

religious, civil, and learned life.

II.

the hely or-

gve

by

on re ry

c. ns

25,

id ly of l-

ns of t-

nd

1-

es

ft

ıt

5,



THE

### THIRD PART

OF

## LOGICK:

Of Reason and Syllogism.

As the first work of the mind is perception, whereby our ideas are framed; and the second is judgment, which joins or disjoins our ideas, and forms a proposition; so the third operation of the mind is reasoning, which joins several propositions together, and makes a syllogism; that is, an argument whereby we are wont to infer something that is less known, from truths which are more evident.

li

an

ar

be

pec

an

po!

an

me

ag fel

ne

fin

ar

fyl

in

W

In treating of this subject, let us consider more particularly,

1. The nature of a fyllogism, and the parts of which

it is composed.

2. The several kinds of fyllogisms, with particular

rules relating to them.

3. The doctrine of sophisms, or false reasoning, together with the means of avoiding them, and the manner of solving or answering them.

4. Some general rules to direct our reasoning.

#### CHAP. I.

Of the Nature of a Syllogism, and the Parts of which it is composed.

F the mere perception and comparison of two ideas would always shew us whether they agree or disagree; then all rational propositions would be matters of intelligence, or first principles, and there would be no use of reasoning, or drawing any consequences. It is the narrowness of the human mind which introduces the necessity of reasoning. When we are unable to judge of the truth or falshood of a proposition in an immediate manner, by the mere contemplation of its fubject and predicate, we are then constrained to use a medium, and to compare each of them with some third idea, that by feeing how far they agree or difagree with it, we may be able to judge how far they agree or disagree among themselves: as, if there are two lines A and B, and I know not whether they are equal or no, I take a third line C, or an Inch, and apply it to each of them; if it agree with them both, then,

II.

ar-

ich

lar

ge-

r of

ich

eas

dif-

ters

be

It

ces

to

an

its

use

me

isa-

hey

are

are

ap-

en<sub>I</sub>

linfer A and B are equal; but if it agree with the one and not with the other, then I conclude A and B are unequal: if it agree with neither of them, there can be no comparison.

So, if the question be, whether God must be worshipped, we seek a third idea, suppose the idea of a Creator,

and fay,

Our Creator must be worshipped: God is our Creator; Therefore God must be worshipped.

The comparison of this third idea, with the two distinct parts of the question, usually requires two propositions which are called the premises: the third proposition which is drawn from them is the conclusion, wherein the question itself is answered, and the subject and predicate joined either in the negative or the aftermative.

The foundation of all affirmative conclusions is laid in this general truth, that so far as two proposed ideas agree to any third idea, they agree also among themselves. The character of Creator agrees to God, and worship agrees to a Creator; therefore worship agrees to God.

The foundation of all negative conclusions is this, that where one of the two proposed ideas agrees with the third idea, and the other disagrees with it, they must needs disagree so far also with one another: as if no sinners are happy, and if angels are happy, then angels are not sinners.

Thus it appears what is the strict and just notion of a fillogism: it is a sentence or argument made up of three propositions so disposed, as that the last is necessarily inferred from those which go before, as in the instances

which have been just mentioned.

In the constitution of a syllogism two things may be considered, (viz.) the matter and the form of it.

The matter of which a syllogism is made up, is three propositions;

tic

to

W

the

the

W

or

no

acc

the

tivi

par

fyll

propositions; and these three propositions are made up of three ideas or terms variously joined. The three terms are called the remote matter of a syllogism; and the three propositions the proxime or immediate matter of it.

The three terms are named the major, the minor,

and the middle.

The predicate of the conclusion is called the major term, because it is generally of a larger extention than the minor term, or the subject. The major and minor terms are called the extremes.

The middle term is the third idea invented and disposed in two propositions, in such a manner as to shew the connexion between the major and minor term in the conclusion; for which reason the middle term itself

is sometimes called the argument.

That proposition which contains the predicate of the conclusion, connected with the middle term, is usually called the major proposition; whereas the minor proposition connects the middle term with the subject of the conclusions, and is sometimes called the assumption.

Note, This exact distinction of the several parts of a syllogism, and the major and minor terms connected with the middle term, in the major and minor proposition, does chiefly belong to simple or catagorical syllogism, of which we shall speak in the next chapter, though all syllogisms whatsoever have something analogical to it.

Note farther, that the major proposition is generally placed first, and the minor second, and the conclusion in the last place, where the syllogism is regularly com-

posed and represented.

The form of a syllogism is the framing and disposing of the premises according to art, or just principles of reasoning, and the regular inference of the conclusion from them.

The act of reasoning, or inferring one thing from another, is generally expressed and known by the particle

ticle therefore, when the argument is formed according to the rules of art; though in common discourse or writing, such causal particles as for, because manifest the act of reasoning, as well as the illative particles then and therefore: And wheresoever any of these words are used, there is a perfect Syllogism expressed or implied, though perhaps the three propositions do not appear, or are not placed in regular form.

### CHAP. II.

Of the various Kinds of Syllogifms, with particular Rules relating to them.

Syllogisms are divided into various kinds, either according to the question which is proved by them, according to the nature and composition of them; or according to the middle term, which is used to prove the question.

#### SECT. I.

Of universal and particular Syllogisms, both negative and affirmative.

A Coording to the question which is to be proved, fo Syllogisms are divided into universal affirmative, universal negative, particular affirmative, and particular negative. This is often called a division of syllogisms, drawn from the conclusion; for so many

difnew

III.

e up

bree

nat-

nor,

han

in felf

of is nor ect

of ed

oiler, a-

ly on

g of n

e

n

c. 1

comp

ons,

ded

T gifm

tego

dent

tion min

as er

bruce louge

com

gun

calle

belo

S

whi

false

rene

befo

the

univ

verl ferri

uni v part

has tent

and J

forts of conclusions there may be which are marked

with the letters a, e, i, o.

In an universal affirmative syllogism, one idea is proved universally to agree with another, and they be universally affirmed of it, as every sin deserves death, every unlawful wish is a sin; therefore every unlawful wish deserves death.

In an universal negative syllogism, one idea is proved to disagree with another idea universally, and that be thus denied of it, as no injustice can be pleasing to God; all persecution for the sake of conscience is injustice; therefore no persecution for conscience sake can be pleasing to God.

Particular affirmative, and particular negative syllogisms may be easily understood by what is said of universals, and there will be sufficient examples given of

all these in the next Section.

The general principle upon which these universal and particular syllogisms are sounded is this: Whatsoever is affirmed or denied universally of any idea, may be affirmed or denied of all the particular kinds or beings which are contained in the extension of that universal idea. So the desert of death is affirmed universally of sin, and an unlawful wish is one particular kind of sin, which is contained in the universal idea of sin, therefore the desert of death may be affirmed concerning an unlawful wish, and so of the rest.

Note, in the doctrine of fyllogisms, a fingular and an indefinite proposition are ranked among universals, as was before observed in the doctrine of propositions.

### SECT. II.

Of plain, simple Syllogisms, and their Rules.

THE next division of syllogisms is into single and composition of them.

Single

П

ked

OV-

ıni-

very

vifb

ved

be

od;

re-

to

·llo-

mi-

1 of

and

ver

be

ngs rfal

of

fin,

ore

un-

an

as

and

igle

Single syllogisms are made up of three propositions: compound syllogisms contain more than three propositions, and may be formed into two or more syllogisms.

Single syllogisms, for distinction's sake, may be divi-

ded into \* fimple, complex, and conjunctive.

Those are properly called simple or categorical syllogisms, which are made up of three plain, single, or caugorical propositions, wherein the middle term is evidently and regularly joined with one part of the question in the major proposition, and with the other in the
minor, whence there follows a plain single conclusion;
as every human virtue is to be sought with ailigence;
prudence is a human virtue; therefore prudence is to be
sught diligently.

Note, Though the terms of propositions may be complex; yet where the composition of the whole argument is thus plain, simple, and regular, it is properly called a simple syllogism, since the complexion does not

belong to the syllogistic form of it.

Simple syllogisms have several rules belonging to them, which being observed, will generally secure us from also inferences: But these rules being sounded on sour meral axioms, it is necessary to mention these axioms before-hand, for the use of those who will enter into the speculative reason of all these rules.

Axiom 1. Particular propositions are contained in universals, and may be inferred from them; but universals are not contained in particulars, nor can be inferred from them.

Axiom 2. In all universal propositions, the subject is universal: In all particular propositions, the subject is

particular.

Axiom 3. In all affirmative propositions, the predicate has no greater extension than the subject; for its extention is restrained by the subject, and therefore it is X 2 always

As ideas and propositions are divided into fingle and compound, and fingle are subdivided into fimple and complex; so there are the same divisions and sugdivisions applied to syllogisms.

de

th

ne

con

fin par

are

be of

who

the

the

Wh

thou proj

ing

and prop

be co

Axio

and.

cafes

time

ufe c

them

calle

always to be esteemed as a particular idea. It is by mere accident, if it ever be taken universally, and cannot happen but in such universal or singular propositions as are reciprocal.

Axiom 4. The predicate of a negative proposition is always taken universally, for in its whole extension it is denied of the subject. If we say no stone is vegetable, we deny all forts of vegetation concerning stones.

### The Rules of simple, regular Syllogifms are thefe.

RULE I. The middle term must not be taken twice particularly, but once at least universally. For if the middle term be taken for two different parts or kinds of the same universal idea, then the subject of the conclusion is compared with one of these parts, and the predicate with another part; and this will never shew whether that subject and predicate agree or disagree. There will then be four distinct terms in the syllogism, and the two parts of the question will not be compared with the same third idea; as, if I say, some men are pious, and some men are robbers, I can never infer that some robbers are pious, for the middle term men being taken twice particularly, it is not the same men who are spoken of in the major and minor propositions.

RULE II. The terms in the conclusion must never be taken more universally than they are in the premises. The reason is derived from the first axiom, that generals can never be inferred from particulars.

RULE III. A negative conclusion cannot be proved by two affirmative premises. For when the two terms of the conclusion are united or agree to the middle term, it does not follow by any means that they disagree with one another.

this here. See all the grave ingeniously ralled Theorem is that III. Oxid

III.

s by

can-

poli-

on is

on it

163

Sn

diff.

wice the

inds

con-

hew

ree:

ilm.

ared

10115

form

ken

fpo-

r bi

ene-

KA

1 6

rm

991

ifa.

111

RULE IV. If one of the premifes be negative, the conclusion must be negative. For, if the middle terms be denied of either part of the conclusion, it may hew that the terms of the conclusion disagree, but it can never shew that they agree.

RULE V. If either the premises be particular, the conclusion must be particular. This may be proved for

the most part from the axiom.

These two last rules are sometimes united in this single sentence, The conclusion always follows the weaker part of the premises. Now, negatives and particulars are counted inserior to affirmatives and universals.

RULE VI. From two negative premises nothing can be concluded: For they separate the middle term both from the subject and predicate of the conclusion; and when two ideas disagree to a third, we cannot inser that they either agree or disagree with each other.

Yet where the negation is a part of the middle term, the two premises may look like negatives according to the words, but one of them is affirmative in sense; as What has no thought cannot reason; but a worm has no thought; therefore a worm cannot reason. The minor proposition does really affirm the middle term concerning the subject, (viz.) A worm is what has no thought, and thus it is properly in this syllogism an affirmative proposition.

RULE VII. From two particular premises nothing can be concluded. This rule depends chiefly on the first Axjom.

A more laborious and accurate proof of these rules, and the derivation of every part of them, in all possible cases, from the foregoing axioms, require so much time, and are of so little importance to assist the right use of reason, that it is needless to insist longer upon them here. See all this done ingeniously in the Logick called, The art of thinking, Part III. Chap, III. &c.

X. 2

SEC1,

C. .

goil

the

acc ver

figt

lon

the

Th

Da

by

par

re

ri

. 0.

### SECT. III.

Of the Moods and Figures of simple Syllogisms.

Imple syllogisms are adorned and surrounded in the common books of Logick with a variety of inventions about moods and figures, wherein, by the artificial contexture of the letters A, E, I, and O, men have endeavoured to transform Logick, or the art of reasoning, into a fort of mechanism, and to teach boys to fyllogife, or frame arguments and refute them, without any real inward knowledge of the question. This is almost in the same manner as school-boys have been taught perhaps in their trifling years to compose Latin verses; i. e. by certain tables and squares, with a variety of letters in them, wherein by counting every fixth, feventh, or eighth letter, certain Latin words should be framed in the form of bexameters or pentameters; and this may be done by those who know nothing of Latin, or of verses.

I confess some of these logical subtleties have much more use than those versisying tables, and there is much ingenuity discovered in determining the precise number of syllogisms that may be formed in every figure, and giving the reasons of them; yet the light of nature, a good judgment, and due consideration of things tend more to true reasoning than all the trap-

pings of moods and figures.

But lest this book be charged with too great desects and imperfections, it may be proper to give short hints of that which some Logicians have spent so much time and paper upon.

All the possible combinations of three of the letters, A, E, I, O, to make three propositions amount to fixty-four; but fifty-four of them are excluded from forming true syllogisms, by the feven rules in the foregoing

I.

ne.

1-

i-

n

of

ys

1-

is

n

in e-

h,

d

of

h

le

y

it

of

-

S

o.

going section: the remaining ten are variously diverfifed by figures and moods into fourteen syllogisms.

The figure of a syllogism is the proper disposition of

the middle term with the parts of the question.

A Mood is the regular determination of propositions according to their quantity and quality, i. e. their universal or particular affirmation or negation; which are signified by certain artificial words, wherein the confonants are neglected, and these four vowels A, E, I, 0, are only regarded.

There are generally counted three figures.

In the first of them the middle term is the subject of the major proposition, and the predicate of the minor. This contains four moods, viz. Barbara, Celarent, Darii, Ferio. And it is the excellency of this figure that all forts of questions or conclusions may be proved by it, whether A, E, I, or O; i. e. universal or particular, assignmentive or negative; as,

Bar- Every wicked man is truly miserable;
ba- All tyrants are wicked men;
ra, Therefore all tyrants are truly miserable.

Ce- He that salways in fearlis not happy is letter to the la- Covetous men are always in fear to the storm rent. Therefore covetous men are not happy and down

Da- Whatfoever furthers our falvation is good for us;

i. Therefore fome afflictions are good for us.

Fire Nothing that must be repented of is truly desirable:

ri- Some pleasures must be repented of in the base of truly desirable.

Therefore there are some pleasures which are not truly desirable.

In the fecond figure the middle term is the predicate of both the premises: this contains four moods, (viz.) Cefare Cumestree, Festino, Baroco, and it admits only of negative conclusions; as,

So

m

file

di

Je 16

il

li

W

1

Ce- No liar is fit to be believed :

fa- Every good Christian is fit to be believed; re. Therefore no good Christian is a liar.

The reader may eafily form examples of the rest.

The third figure requires that the middle term be the subject of both the premises. It has six moods, viz. Darepti, Felapton, Disamis, Datis, Bocardo, Ferison: and it admits only of particular conclusions as,

Da- Whosoever loves God shall be saved:
rap- All the lovers of God have their impersections;
ti. Therefore some who have impersections shall be saved.

I leave the reader to form examples of the rest.

The moods of these three figures are comprised in four Latin verses.

Barbar celarent, darii, ferio quoque primæ. Cefare, Camestres festino, baroco, secundæ. Tertia darapti sibi vindicat, atque felapton, Adjungens disamis, datisi, bocardo, ferison. The special rules of the three figures are these.

In the first figure, the major proposition must always be universal, and the minor affirmative.

In the fecond figure, also, the major must be universal, and one of the premises, together with the conclusion, must be negative.

In the third figure, the minor must be affirmative,

and the conclusion always particular.

There is also a fourth figure, wherein the middle term is predicated in the major proposition, and subjected in the minor: But this is a very indirect and oblique manner of concluding, and is never used in the sciences,

nor

III.

be

ods,

rdo. lu-

15;

in.

nor in human life, and therefore I call it useless .-Some Logicians will allow it to be nothing elfe but a mere inversion of the first figure; the moods of it, viz. Baralipton or Barbari, Calentes, Dibatis, Fespamo, Frefilom, are not worthy to be explained by one example.

#### er mane that the modelle termine SECT. IV.

### Of Complex Syllogisms.

TT is not the mere use of complex terms in a syllogisin that gives it this name, though one of the terms is usually complex; but those are properly called complex fillogifms, in which the middle term is not connected with the whole subject, or the whole predicate in two diffinct propositions, but is intermingled and compared with them by parts, or in a more confused manner, in different forms of speech; as,

The fun is a fenfeless being: The Persians worshipped the sun; Therefore the Persians worshipped a senseless being.

Here the predicate of the conclusion is worshipped a senseless being, part of which is joined with the middle term fun in the major proposition, and the other part in the minor.

Though this fort of argument is confessed to be entangled or confused, and irregular, if examined by the rules of fimple fyllogifms; yet there is a great variety of arguments used in books of learning, and in common life, whose consequence is strong and evident, and which must be ranked under this head; as,

I. Exclusive propositions will form a complex argument: as, pious men are the only favourites of heaven; our lading and is never and in the ferences,

C. I

lived Lone

TI

bath

bloffo

juft 1

dered

bisto first

N

and

be n

iust

of th

from gilm

1

be r

to r

Iw

reft

Ban

2

1

beir

is e

whi

wh:

trut

true Christians are favourites of heaven; therefore true Christians are pious men. Or thus, hypocrites are not pious men; therefore hypocrites are no favourites of heaven.

II. Exceptive propositions will make such complex syllogisms; as, none but physicians came to the consultation; the nurse is no physician; therefore the nurse came not to the consultation.

III. Or Comparative propositions; as, knowledge is better than riches; virtue is better than knowledge; therefore virtue is better than riches; or thus, a dove will fly a mile in a minute; a swallow flies swifter than a dove; therefore a swallow will fly more than a mile in a minute.

IV. Or inceptive and desitive propositions; as, the fogs vanish as the sun rises; but the fogs have not yet begun to vanish; therefore the sun is not yet risen.

V. Or modal propositions; as, it is necessary that a General understand the art of war; but Caius does not understand the art of war; therefore it is necessary Caius should not be a General. Or thus, A total eclipse of the sun would cause darkness at noon; it is possible that the moon at that time may totally eclipse the sun; therefore it is possible that the moon may cause darkness at noon.

Besides all these, there is a great number of complex syllogisms which can hardly be reduced under any particular titles, because the forms of human language are

fo exceeding various; as,

Christianity requires us to believe what the apostles wrote; St. Paul is an apostle; therefore Christianity requires us to believe what St. Paul wrote.

No human artist can make an animal; a fly or a worm is an animal; therefore no human artist can make a fly

or a worm.

The father always lived in London; the fon always lived

lived with the father; therefore the fan always lived in London.

The blossom soon sollows the full bud; this pear-tree hath many full buds; therefore it will shortly have many blossoms.

One hail-stone never falls alone: but a hail-stone fell

just now: therefore others fell with it.

16

of

X

1-

ne

is

;

ve

in

n

be

et

a

ot

15

be

be

re

x

i-

e

29

m gy

ys

Thunder seldom comes without lightning; but it thundered yesterday; therefore probably it lightened also.

Moles wrote before the Trojan war; the first Greek historians wrote after the Trojan war; therefore the

first Greek historians wrote after Moses.\*

Now, the force of all these arguments is so evident and conclusive, that though the form of the syllogism be never so irregular, yet we are sure the inferences are just and true; for the premises according to the reason of things, do really contain the conclusion that is deduced from them, which is a never-failing test of true syllogism, as shall be shewn hereafter.

The truth of most of these complex syllogisms, may also be made to appear (if needful) by reducing them either to regular, simple syllogisms, or to some of the conjunctive syllogisms, which are described in the next section. I will give an instance only in the first, and leave the

rest to exercise the ingenuity of the reader.

The first argument may be reduced to a syllogism in Barbara thus:

The fun is a fenfeless being;

What the Persians worshipped is the sun:

Therefore what the Persians worshipped is a senseless being. Though the conclusive force of this argument is evident without this reduction.

SECT.

Perhaps some of these syllogisms may be reduced to those which I call connexive afterward; but it is of little moment to what species they belong; for it is not any formal set of rules, so much as the evidence and force of reason, that must determine the buth or salshood of all such syllogisms.

removing of the confequent to the removed by of the antece-

# To remove the and ced T.D. I diequent, here, does not merely fignify the desiral of it, but the contradiction

### Of Conjunctive Syllogifms. of 101 : 11 to

THOSE are called conjunctive syllogisms, wherein one of the premises, namely, the major, has distinct parts, which are joined by a conjunction, or some such particle of speech. Most times the major or minor, or both, are explicitly compound propositions: And generally the major proposition is made up of two distinct parts or propositions, in such a manner, as that by the affertion of one in the minor, the other is either afferted or denied in the conclusion: Or, by the denial of one in the minor, the other is either afferted or denied in the conclusion. It is hardly possible indeed to fit any short definition to include all the kinds of them; but the chief among them are the conditional syllogism, the disjunctive, the relative, and the connexive:

I. The conditional or hypothetical fyllogism is whose major or minor, or both, are conditional propositions; as, if there be a God, the world it governed by providence; but there is a God: therefore the world is governed by

These syllogisms admit two sorts of true augmentation, where the major is conditional.

1. When the antecedent is afferted in the minor, that the confequent may be afferted in the conclusion: fuch is the preceding example. This is called arguing from the position of the antecedent to the position of the

Who lees not me inficulous falthood of .troupsquor

providence.

2. When the consequent is contradicted in the minor proposition, that the antecedent may be contradicted in the conclusion; as, If atheists are in the right, then the world exists without a cause: but the world dath not exist without a cause; therefore atheists are not in the right. This is called arguing from the proposed

of on

bu fori bri coi

or tha

Cho Cho Fro

clu

to si

but I

but to

O confe

the akin

removing of the consequent to the removing of the antece-

To remove the antecedent or consequent here, does not merely signify the denial of it, but the contradiction of it; for the mere denial of it by a contrary proposition will not make a true syllogism, as appears thus If every creature be reasonable; every brute is reasonable; but no brute is reasonable; therefore no creature is reasonable. Whereas, if you say in the minor, but every brute is not reasonable, then it would follow truly in the conclusion, therefore every creature is not reasonable.

When the antecedent or consequent are negative propositions, they are removed by an assistance; as, if there be no God, then the world does not discover treating wisdom; therefore there is a God. In this instance the consequent is removed or contradicted in the uninor, that the antecedent may be contradicted in the conclusion. So, in this argument of So Paul, a Cor. xxxxxx. 16. If the dead rise not, Christ died in vain, but Christ died not die in vair, therefore the dead, shall rise.

There are also two forts of falls arguing, et z. (1)

From the removing of the antecedent to the removing of the consequent to the position of the consequent to the position of the consequent to the position of the antecedent, becamples of these are cally framed; 25,

(1) If a minister were a prince be must be honoured;

(2.) If a minister were a prince he must be honoured; but a minister newstable honoured saligned without A .I. Therefore he is a prince.

who does not the reducible avoid to the captaint and gold with the there else. Or, he is the captaint and gold to be the captain in a covered; therefore his

Consequent be the same when the hipsthetical syllogism may be turned into a categorisal one; as of Cefal be ting, be must be homeored: but "Gæfar is a king, of Y

not of i

no

III.

rem

rein difome

ge-

the rted ne in

hort hief

hole

as, nea: d by

nta-

nor, on:

the

the

the the

the

Seco

tec

the

We

COL

fer.

M

Flo

Flo

fluc

the

ALL VIEW

lati

was

therefore &c. This may be changed thus, Every ting must be honoured; but Cæfar is a king; therefore

Observ. II. If the major proposition only be conditional, the conclusion is categorical: But if the minor of whoth he conditional, the conclusion is also conditional; as, The worshippers of images are idolaters: If the Papists worship a crucifix, they are worshippers of an image: therefore, If the Papists worship a crucifix, abey are idolaters. But this fort of fyllogisms should be avoided as much as possible in disputation, because they greatly embarrass a cause: The syllogisms, whose major only is hypothetical, are very frequent, and used with great advantage.

II. A disjunctive fyllogifen is when the major propofition is disjunctive; as, The earth moves in a circle or an ellipsis; but it does not move in a circle; therefore it moves in an ellipses.

moves in an ellipsis of the party many members of A disjunctive syllogism may have many members of parts thus; It is either spring, summer, autumn, or winter; but it is not spring, autumn, or winter; therefore it is summer.

The true method of arguing here is from the affertion of one, to the denial of the rest, or from the denial of one or more, to the affertion of what remains; but the major should be so framed, that the several parts of it cannot be true together, though one of them is evidently true.

III. A relative syllogism requires the major proposition to be relative; as, Where Christ is, there shall his sermants be; but Christ is in heaven; therefore his serwants shall be there also. Or, As is the captain, so are his soldiers; but the captain is a coward; therefore his soldiers are so too.

Arguments that relate to the doctrine of proportion in the referred to this head; as, A two era to four, se are three for the body of four; there fore three make the half of fix.

Beings

II,

ery.

ore

or of:

the

an fix,

be

ule

ole

ied

1111

00-

or

et

10

e-

101

ial

ts

13

F

bis

\*

bis

ar

明小

which is very natural and common, and yet authors take very little notice of it, call it by an improper name, and describe it very defectively; and that is, wrold on the control of the c

IV. A connective fyllogism. This some have called copulative; but it does by no means require the major to be a compative nor a compound proposition faccording to the definition given of it, Part II. Chap. II. Sect. 6.) but it requires that two or more ideas be for connected either in the complex subject or predicate of the major; that if one of them be affirmed or denied in the minor, common sense will naturally show us what will be the consequence. It would be very tedious and useless to frame particular rules about them, as will appear by the following examples, which are very various, and yet may be farther multiplied.

was a man of meekness, therefore Moses was also humble.
Or, we may form this minor; Pharach was no humble man: "therefore he was not meek!

(2.) No man can ferve God and Manmon withe avetous man serves Mammon; therefore he cannot still God. "Or, the miller may fund thus out the Christian served God; therefore he does not serve Mammon and to not the land of not served mammon and to not the land of server we are to

(3) Genius must join with study to make a great man:
Florino has genius, but he tannot study; therefore
Florino will never be a great man. Or thus, Quintus
studies hard, but has no genius; therefore Quintus,
will never be a great man.

4.1 Gulo cannot make a dinner without fiell and fife there was no fife to be gotten to day; therefore Gulo this lay cound make a dinner.

letitude of London is 51 = deg.; therefore this eximit herefore this eximit herefore this eximit. Herefore this eximit. Herefore this eximit. A property of the content of the herefore the content of the herefore the content of the

was the mother of Joseph; therefole the worker was the mother of Joseph; therefole the work Benjamin's limited and so Benjamin's limited for make the half of Joseph; therefole the work of Joseph; therefole the work of the sound of the soun

m

ep

CC fp

pa do

M.

pl

01

is

de

62

H

th

PC

(7.) The father and the son are of equal stature: the father is fix foot high; therefore the fon is fix foot high

alfo.

(8.) Pride is inconsistent with innocence: angels have innocence; therefore they have no pride, thus; devils have pride; therefore they have not innocence.

de I might multiply other inflances of thefe rennerise fyllogitms, by bringing in all forts of exceptive, excepte, comparative and medal propositions into the amposition of them; for all these may be wrought into conjunctive as well as into fimple fyllogisms, and thereby we may render them complex. But it would waste time and paper without equal profit.

Concerning these various kinds of conjunctive syllo-

gifms, take thefe two observations.

do the find but bearings ad view all worth and lotter district the may be transformed into categorical lyllogums by these who have a mind to prove the truth of them that way; or they may be easily converted into each other by changing the forms of speech. But we are uneaff under sickness, which appeare 189

Observ. II. These conjunctive fullogisms are seldom deficient or faulty in the form of them; for such a deficiency would be discovered at first plance, generally by common reason, without any artificial rules of Logick: The chief care therefore is to see that the major the argument ulually depends. His minor is, that Clodius laid wait, for Milo: which he proves by his arms, guards, &c. and then infers the conclusion that it was lawful for Milo to kill SECTION!

II. A Dilemma is an argument which divides the whole into all its parts or members by a disjunctive proposition and then infers something concerning each part which is finally inferred concerning the whole. Inflances

113.

the

high

gels

Or not

Abe,

ition

Elive

and

fpce

into

d to

be

rms

dom

de-ally

Lo-aper of

H

he

yı.

77"

9

### father is his feet been were terrested the for it fix fix high SECT. VI.

(8.) Pride is an expless with innocunce: angely

247. The latino maris von use of a grait linear a the

### Of Compound Syllogifms.

E properly call those compound syllogisms which are made of two more single syllogisms, and may be resolved into them. The chief kinds are these, pichirema, delemma, profyliogifmi, and forites.

I. Epichirema is a syllogism which contains the proof? of the major or minor, or both, before it draws the conclusion. This is often used in writing, in publick. beeches, and in common conversation, that so each. part of the discourse may be confirmed and put out of. doubt, as it moves on toward the conclusion, which was chiefly defigned. Take this instance..

Sickness may be good for us; for it weans us from the

pleasures of life, and makes us think of dying.

But we are uneasy under sickness, which appears by our impatience, complaints, groanings, &c.

Therefore we are uneof sometimes under that which

is good for us.

Another instance you may see in Cicero's oration in defence of Mile, who had flain Clodius. His major propositions is, that it is lawful for one man to kill another, who lies in wait to kill bim; which he proves from the custom of nations from natural equity, examples, &c... His minor is, that Clodius laid wait for Milo: which he proves by his arms, guards, &c. and then infers the conclusion, that it was lawful for Milo to kill Clodius.

II. A Dilemma is an argument which divides the whole into all its parts or members by a disjunctive propolition, and then infers fomething concerning each part which is finally inferred concerning the whole. In-

Stances,

C

fo

pl

th

ar

fc

B

fo

is

ar

cl

Ca

be

th.

23

th

M

de

ki

111

P

S

ca

Ve

Ca

stances of this are frequent; as, In this life we muy either obey our vicious inclinations or resist them; to obe them will bring sin and sorrow, to resist them is laboriou and painful; therefore we cannot be perfectly free from

forrow or pain in this life.

A Dilemma becomes faulty or ineffectual three ways First, when the members of the division are not well opposed, or not fully enumerated; for then the major is false. Secondly, When what is afferted concerning each part is not just; for then the minor is not true Thirdly. When it may be retorted with equal force up on him who utters it.

There was a famous ancient instance of this cal wherein a dilemma was retorted. Euathlus promife Protagoras a reward when he had taught bim the or of pleading, and it was to be paid the first day that h gained any cause in the court. After a considerable time Protagoras goes to law with Euothlus for the reward, and uses this dilemma; Either the cause wil go on my fide or on yours : if the cause goes on my fide, yo must pay me according to the sentence of the judge; if the caufe goes on your fide, you must pay me according to you bargain : Therefore, whether the canfe goes for me of against me, you must pay me the reward. But Euathlu retorted this dilemma thus : Either I fall gain the kan or lofe it : if I gain the cause, then nothing will be du to you according to the fentence of the judge: But if I'm the cause, nothing will be due to you according to my bargain therefore whether I lofe or gain the cause, I will not po you, for nothing will be due to you.

Note 1. A Dilemma is usually described as though in always proved the absurdity, inconvenience, or unreasonableness of some opinion or practice: and this is the most common design of it; but it is plain, that it may also be used to prove the truth or advantage of any thing proposed; as, In Heaven we shall either have desires or not: if we have no desires, then we have full satisfaction; if we have desires, they shall be satisfied a

 $\mathbf{H}\mathbf{I}$ 

nu

obe

rou

ron

lys

wel

ajo

in

rue

up

cal

ife ar

th

abl

th

wil

you

16

1011

0

blu

au/

du tol

im

pa

hi

rea

th

nay any

av ful

la.

Fa/

fast as they arise , therefore in Heaven we shall be completely fatisfied.

Note 2. This fort of argument may be compoled of three or four members, and may be called a trilemma.

III. A Profyllogism is when two or more syllogisms are so connected together, that, the conclusion of the former is the major or the minor of the following; as, Blood cannot think; but the foul of man thinks; therefore the foul of man is not blood : but the foul of a brute is his blood, according to the scripture; therefore the foul of man is different from the foul of a brute. See another instance in the Introduction to this Treatife, p. 5.

IV. A forities is when feveral middle terms are chosen to connect one another successively in several propositions, till the last proposition connects its predicate with the first subject. Thus, All men of revenge have their fouls often uneafy; uneafy fouls are a plague to themselves; now to be one's own plague is folly in the extreme; therefore all men of revenge are extreme fools.

The Apostle, Rom. viii. 29. gives us an instance of this fort of argument, if it were reduced to exact form: Whom he foreknesv, those he predestinated ; whom he predestinated, he called; whom he called, be justified; whom he justified, he glorified : therefore whom he fore-

knew be glorified.

To these syllogisms it may not be improper to add induction, which is, when from feveral particular propositions we infer one general; as, The doctrine of the Socinians cannot be proved from the acts of the Apofles, it cannot be proved from the epiftles, nor the book of Revelation; therefore it cannot be proved from the New Testament.

Note. This fort of argument is often defective, because there is not due care taken to enumerate all the particulars on which the conclusion should depend.

All

All these four kinds of syllogisms in this section may be called redundant, because they have more than three propositions. But there is one fort of fyllogitm which is defective, and is called an enthymen, because only the conclusion with one of the premises is expressed, while the other is supposed and reserved in the mind : Thus, There is no true religion without good morals; therefore a knave cannot be truly religious; Or thus, It is our ditty to love our neighbours as ourselves; therefore there are but few who perform their duty.

Note, This is the most common fort of argument amongst mankind both in writing and in speaking; for it would take up too much time, and too much retard the discourse, to draw out all our arguments in mood and figure. Befides, mankind love to have fo much compliment paid to their understandings, as to suppose that they know the major or minor which is suppressed and implied, when you pronounce the other premise and

the conclusion.

. If there be any debate about this argument, the fyllogism must be compleated in order to try its force and goodness, by adding the absent proposition.

### SECT.

Of the middle terms, of common places or topics, and invention of Arguments.

THE next division of follogisms is is according to the middle term, which is made use of in the proof of any proposition. Now, the middle term (as we have hinted before) is often called argument, because the force of the fyllogism depends upon it: We make a little delay here to treat briefly of the doctrine of topics, or places whence middle terms or arguments are drawn.

All

ple

ar

ad

la

th

DE

fe

50

fe

1/

a

to

ye

Allarts and sciences have some general subjects which Mach goto theth, nwhich oate called wto page alorem mon Miles . Because middle terms are borrowed and begod Hents derived from them for the ploof of thele who house aropolitions which we have occasion to discourse offi The topics of Grammar, are Etymology, Noun, Were, Construction, Signification, Sec. The topics of Loriet. are denius, species, difference, property, definition division, &c. The ropics of ontology or metaply ficks, are coules effect, action, passion, identity, opposition, subjects adjunct, fign, &c. The topics of morality or ethicks? are litte, fing thety authority? freedom of will, command, threathing, ketoard, punishment, &c. of The topics of Theology are God, Christ, faith, bope, wer flip, falthe discourt, to draw out all our argumes & Another To these several topics there belong particular obfervations, axioms, canonspror rules, which are laid

fervations, exioms, cations convides, which excepted downsto their properdiences pass, eath word yell take to Grammur shath stick cunous quivised Worldish a different construction obtain a different sense; noords idenived from the same primitive may probably bave some affinity in their original meanings each each place of the manufactures.

Canons in Logickiare most as these, Every part of a division singly taken must contain less than the whole. A definition must be peculiar and proper to the thing defined. Whatever is affirmed or denied of the genius, may be affirmed or denied of the senius, may be

Metaphysical canons are fuch as these; Final causes helong only to intelligent agents. If a natural and necessary cause operate, the effect will follow, &c. and there are large catalogues of many more in each distinct science.

Henextdivision of follogishes is is according to the -o. I character about to incide a suit and exhibit the off of the continuous states and the suit of the suit

MA

II.

ee

ch

he

ile

15,

C-

re

nt

or

rd od

h

fe

d

d

10

e

1

e.

2360

that

niten

yiiii

100

piou

1014

our t

argu

10

L

topby

nide

hat Scrif

we p

equit

ba-

OP

PROT

MACK!

man

HEP

ther

tions

ums divi

by i

are suited to their subject of discourse, and to rummage over the definitions, divisions, and canons that belong to each topic. This is called the invention of an argument, and it is taught with much solemnity in some schools.

I grant there may be good use of this practice for persons of a lower genius, when they are to compose any discourse for the public; or for those of superior parts to restrict their memory, and revive their set quaintance with a subject which has been long assest from their thoughts, or when their natural spirits has bour under indisposition and languar; but when a man of moderate sagacity has made himself master of his theme by just diligence and enquiry, he has seldom need to run knocking at the doors of all the topics that he may suriss himself with argument or matter of speakings. And, indeed, it is only a man of sense and judgment that can inseed, it is only a man of sense well; for amongst this variety he only knows what is successful to be spoken.

invention is treated of in such as mainter with mather matical figures and diagrams, filled with the barbarous technical words on peant Wipes, Repeas North, &c. as though an ignorant lad were to be less method meally on terrain airlivial harnesses and arabhets; to find our arguments to prove of reside any proposition what sever, without any training knowledge of the ideas. Now, there is no need to throw words of continuous tempt on such a practice, the very description of reasons ries reproof and ridicule in abundance.

Evident and certain arguments are called demonfirations; for they prove their conclusions by clear mediums and undoubted principles; and they are generally divided into these two sorts.

i. Demonstrations a priori, which prove the effect by the needed as I prove the scripture is infallibly true, because itisthe word of God who cannot lie.

2. Demonstrations

11

age

hat

tion

nity

For

ofe

rior

Min

EKT

of

om

ide

ter

(er

Pi

150

DW

Add

698

1. P.

don

to

Pire

360

211

adt the

tion

div div

by

fal

are fuited to their subject of discourse, and to rummage over the definitions, divisions, and canons that belong to each tomity The are ded the invention of an argument, and it is taught with much solemning in some schools.

Of federal kinds of Arguments and Demonstrations. persons of a lower genius, when they are to compose say difficultie for the public; or for those of funeries TE proceed now to the division of syllogisms ac-Wy cording to the middle term; and in this part of our treatife the fyllogifins themselves are properly called from under indifferential distributed and in referent mod man of moderate fagacity has made himfelf mafter of I Arguments are called Grammatical Logical Men uphylical, Phylical, Moral, Mechanical, Theological, &co. gording to the art, fcience, or fubject, whence the middle term or topic is borrowed. Thus, if we prive hat no man should steal from his neighbours because thes Scripture forbids it this is a theological argumenticity we prove it from the laws of the land, it is political? but if we prove it from the principles of reason and invention is treated of in his him elationing as orthography matical figures and diagrams, filled with the barba-&c. as though an ignorant islander of the bear lufthing of robable organizate those whole monchisopellane proved by some probable medium, as This hill wan ince a church word or a field of bottle because there were many burnan banes found; here This is not a certain reproduct for human bones might have been conveyed ries reproof and ridicule in abundavew ratto and and

Evident and certain arguments are called demonstrations; for they prove their conclusions by clear mediums and undoubted principles; and they are generally

divided into these two forts.

1. Demonstrations a priori, which prove the effect by its necessary cause; as I prove the scripture is infallibly true, because it is the word of God who cannot lie.

2. Demonstrations.

c. 1

with

is fc

1

dire

the

whi

lique

and

by I

Wh

false

posi

posi proc

Wh

whi

orig

This

Wh

was

is an

119

V

have

from

thou

fait!

paffi

1.

iften kind.

.2. teffin

our ;

3.

Wha 1

2. Demonstrations a posteriori, which infer the cause from its necessary effect; as, I infer there bath been the hand of some artificier here, because I find a curious engine. Or, I infer, there is a God, from the Works of bis wifdom in the vifible world.

The last of these is called demonstratio Tre on, because it proves only the existence of a thing; the first is named demonstrations dion, because it shews also the

cause of existence.

But Note, that though these two forts of arguments are most peculiarly called demonstrations, yet generally any strong and convincing argument obtains that name; and it is the custom of mathematicians to call all their arguments demonstrations; from what medium foever they derive them.

III. Arguments are divided into artificial and inar-

tificial.

An artificial argument is taken from the nature and circumstances of the things; and, if the argument be strong, it produces a natural certainty; as, The world quas at first created by God, because nothing can create itself.

An inartificial argument is the testimony of another, and this is called original, when our information proceeds immediately from the persons concerned, or from eve to ear witnesses of the fact : it is called wadition

when it is delivered by the report of others,

We have taken notice before, that testimony is either divine or human. If the human restimony be strong it produces a moral certainty; but divine testimony produces a fupernatural certainty, which is far superior

Note, Arguments taken from human testimony as well as from laws and rules of equity, are called moral; and indeed the same name is also applied to every fort of argument which is drawn from the free actions of God, or the contingent actions of men, wherein we cannot rife to a matural tertainty, but content ourselves oldonoolf-s

with

H.

use

een

ous

-9C

rst

he

113

lly

es

eir

er

(2)

12/1

RA

d

be d

H

teg

r,

n

n

1

it

-01

5

ÇHI

til

3

with an high degree of probability, which in many cases is scarce inserior to natural certainty.

IV. Arguments are either direct or indirect. It is a direct Argument where the middle term is such as proves the question itself, and infers that very proposition which was the inatter of enquiry. An indirect or oblique argument proves or resutes some other proposition, and thereby makes the thing, enquired appear to be true

by plain consequence.

Several arguments are called indirect; as, (1.) When some contradictory proposition is proved to be false, improbable, or impossible: Or, when upon supposition of the falshood, or denial of the original proposition, some absurdity is inferred. This is called a proof per impossible, or a reductio ad absurdum. (2.) When some other proposition is proved to be true which is less probable, and thence it follows that the original proposition is true, because it is more probable. This is an argument ex magis probabili ad minus. (3.) When any other proposition is proved upon which it was before agreed to yield the original question. This is an argument ex concesso.

V. There is yet another rank of arguments which have Latin names; their true distinction is derived from the topics or middle terms which are used in them, though they are called an address to our judgment, our faith, our ignorance, our profession, our modesty, or our passions.

1. If an argument be taken from the nature or exflence of things, and addressed to the reason of man-

hind, it is called a gumentum ad judicium.

2. When it is borrowed from some convincing testimony, it is argumentum ad fidem, an address to our faith.

3. When it is drawn from any infufficient medium whatfoever, and yet the opposer has not skill to refute

C. III. 63.

111

for

tru

bar

me

the

tha

12

div

ing:

GIL

UNO

£01 the

or wl

1 /21

an

is

ou

ne

10 3

10 2 Mall.

51.1

Talus

75 7

·Link

for the conftruction and regulation of it, it is called a or answer it, this is argumentum ad ignorantium, an

The right Use of BRASON

address to our ignorance. : monning in allof to enlight und

When it is built upon the professed principles of opinions of the person with whom we argue, whether the opinions be true or false, it is named argumentum ad hominem, an address to our professed principles. St. Paul often uses this argument when he reasons with the Jews; and when he fays, I fpeak as a man.

5. When the argument is fetched from the fentiments of fome wife, great, or good men, whose authority we reverence and hardly dare oppose, it is calded argumentum ad vericundiam, an address to our

modefty.

6. I add, finally, when an argument is borrowed from any topics which are fuited to engage the inclinations and passions of the hearers on the side of the speaker, rather than to convince the judgment, this is argumentum ad passiones, an address to the passions; or if it be made publicly, it is called ad populum, or an

appeal to the people.

After all these divisions of fyllogism or argument arising from the middle term, there is one distinction proper to be mentioned which arises from the premises An argument is called uniform when both the premiles are derived from the same springs of knowledge, whe ther it be fense, reason, consciousness, human faith, or divine faith: But when the two premises are derived from different springs of knowledge, it is called a mix argument

Whether the conclusion must be called human of divine, when one or both premises are matters of divine faith, but the conclusion is drawn by human reason, I leave to be disputed and determined in the

Schools of Theology.

Thus the fecond chapter is finished, and a particula account given of all the chief kinds of fyllogifing or argyments which are made use of among men, or treated of in Logick, together with special rules for the forma tion of them, as far as is necessary.

III

for

2/1/20

bara

es or

ether

htun

St with

enti-

au-

calour

wed ncli

the is is Or

r an

nent

tion

ifes

rifes

he

OI

ved nix

0 0

nan the

ıla arted ma

If a fyllogism agree with the rules which are given for the construction and regulation of it, it is called a. true argument: If it disagree with these rules, it is a paralogifm, or false argument : But when a false argument puts on the face and appearance of a true one. then it is properly called a fophism or fallacy, which hall be the fubject of the next chapter. ad hominem, an address want pretified opinoples. St. Paul etten vies this arguilled when he reasons with

# the state of the state of the contract of the state of th

ments of some wife, great, or good men, whole and

s. When the argument is terched from the lent.

### The Doctrine of Sophifins. from any copies which are thread to consuge the delle

FROM truth nothing can really follow but what is true: Whenfoever therefore we find a false conclusion drawn from premises which seem to be true, there must be some fault in the deduction or inference; or else one of the premises is not true in the sense in which it is used in that argument.

When an argument carries the face of truth with it, and yet leads us into mistake, it is a sophism; and there is some need of a particular description of these fallacious arguments, that we may with more ease and readi-

ness detect and solve them.

### Whether the collaboration of the SECT of the advance of

trom different totales of knowledge, it is called a mid

distinct when one or both premites are marters of

## Of several kinds of Sophisms, and their Solution.

B the rules of right judgment and of good ratioor in Lo relatively with special rules for the forms

tion of the as as far as is necessary.

Souls of Theology.

0

fi

h

h

to

d

L

t

t

doctrine of prejudices, which was treated of in the fecond part of Logick, has anticipated a great deal of what might be faid on the subject of sphisms; yet I shall mention the most remarkable springs of false argumentation, which are reduced by Logicians to some of the following heads.

I. The first fort of sophism is called ignoratio elenchi, or a mistake of the question; that is, when something elfe is proved which has neither any necessary connex. ion nor inconsistency with the thing enquired, and confequently gives no determination to the enquiry, though it may feem at first fight to determine the question; as if any should conclude that St. Paul was not a native Tew, by proving that he was born a Roman; or, if they should pretend to determine that he was neither Roman nor Jew, by proving that he was born at Tartus in Cilicia: These sophisms are refuted by shewing that these three may be true; for he was born of Jewish parents in the city of Tursus, and by some peculiar privilege granted to his parents, or his native city, he was born a denizen of Rome. Thus there is neither of these three characters of the Apostle inconfiftent with each other, and therefore the proving one of them true does not refute the others. Todio at guidi

Or, if the question be proposed, Whether excess of rouse cam be hartful to himself and the so-there in the solution of hartful to himself and the solution is exhibited as a man courage, and makes him strong and astive, and then he takes it for granted that he has proved his point.

But the respondent may easily shew, that though wine may do all this, yet it may be finally burtful both to the foul and body of him that drinks it to excess.

Distation when they grow warm are ready to run into this failacy: they dress up the opinion of their advertary as they please, and ascribe fentiments to him which the doth not acknowledge, and when they have within great

\* Him that drinks it.

III.

the

all of

et I

rgu-

e of

nchi,

hing

nex-

on-

ngh

as

tive

, if

her at

-W

of

ine

ive

is

n-

ne

of

1

W.

m

at

h

0

great deal of pomp attacked and confounded these images of straw of their own making, they triumph over their adversary as though they had utterly confuted his opinion.

It is a fallacy of the same kind which a disputant is guilty of, when he finds that his adversary is too hard for him, and that he cannot fairly prove the question first proposed; he then with syness and subtilty turns the discourse aside to some other kindred point which he can prove, and extilts in that new argument wherein his opponent never contradicted him.

The way to prevent this fallacy is by keeping the eye fixed on the precise point of dispute, and neither wandering from it ourselves, nor suffering our antagonist to wander from it, or substitute any thing else in its.

room.

II. The next sophism is called petitio principii, or a supposition of what is not granted; that is, when any proposition is proved by the same proposition in other words, or by something that is equally uncertain and disputed: as if any one undertake to prove that the buman soul is extended through all the parts of the body; because it resides in every member, which is but the same thing in other words. Or, if a Papist should pretend to prove that his religion is the only Catholick religion, and is derived from Christ and his Apostles, because it agrees with the doctrine of all the fathers of the church, all the holy Martyrs, and all the Christian world throughout all ages; whereas this is a great point in contest, whether their religion does agree with that of all the ancients, and the primitive Christians, or not.

III. That fort of fallacy which is called a circle, is very near a kin to the petitio principii; as when one of the premises in a syllogism is questioned and opposed, and we intend to prove it by the conclusion: Or, when in a train of syllogisms we prove the last by recurring

Z.3

to

For

TIE

1108

the

fro

ed

WI

Wi

bot

gua

har

ph

ign

W

for

tha

fiti

the

me

wl

m

th

an

ph

rej

im

me

ch

be ce

are famous at this fort of fallacy, when they prove the foripture to be the word of God, by the authority or infallible testimony of their church; and when they are called to shew the infallible authority of their church, they pretend to prove it by the scripture.

IV. The next kind of sophism is called non causa pro causa, or the assignation of a salse cause. This the peripatetic philosophers were guilty of continually, when they told us certain beings, which they called substantial forms, were the springs of colour, motion, vegetation, and the various operations of natural beings in the animate and inanimate world; when they informed us that nature was terribly assaid of a vacuum, and that this was the cause why the water would not fall out of a long tub if it was turned upside down: The Moderns as well as the Ancients sall often into this sallacy, when they positively assign the reasons of natural appearances, without sufficient experiments to prove them.

Aftrologers are over-run with this fort of fallacies, and they cheat the people grolly by pretending to tell fortunes, and to deduce the cause of the various occurrences in the lives of men, from the various positions of the stars and planets, which they call aspects.

When comets and eclipses of the sun and moon are construed to signify the fate of princes, the revolution of states, famine, wars, and calamities of all kinds, it is a fallacy that belongs to this rank of sophisms.

There is scarce any thing more common in human life than this fort of deceitful argument. If any two accidental eventshappen to concur, one is presently made the cause of the other. If Titius wronged his neighbour of a guinea, and in six months after he fell down and broke his leg, weak men will impute it to the divine vengeance on Titius for his former injustice. This sophism was found also in the early days of the world:

SI

18

HOE.

th

y

an

S

In

y:

t

6

)

to

ein

177

111

W

II. 9

For when boly Job was fur rounded with uncommon mife-of ries his own friends inferred, that he was a most being nous criminal and charged him with aggravated guilt as the cause of his calamities; though God himself by a voice from heaven folved this uncharitable fophifm, and clear-or ed his fervant Job of that charge. A the story of basising

How frequent is it among men to impute crimes to wrong persons? We too often charge that upon the wicked contrivance and premeditated malice of a neighbour, which arose merely from ignorance, or from anguarded temper. And on the other hand, when we have a mind to excuse ourselves, we practice the fophism, and charge that upon our inadvertence or our ignorance, which perhaps was defigned wickednefs. What is really done by a necessity of circumstances, we fometimes impute to choice. And again, we charge that upon necessity, which was really defired and chosen.

Sometimes a person acts out of judgment in oppor fition to his inclination; another person perhaps acts the fame thing out of inclination, and against his judg-It is hard for us to determine with affurance what are the inward fprings and fecret cause of every man's conduct; and therefore we should be cautious and flow in passing a judgment, where the case is not exceeding evident; and if we should mistake, let it rather be on the charitable than on the conforious fide.

It is the same fophism that charges mathematical learning with leading the minds of men to scepticifin and infidelity, and as unjustly accuses the new philosophy of paving the way to herefy and schism. Thus the reformation from Popery has been charged with the murder and blood of millions, which in truth is to be imputed to the tyranny of the princes and the priests, who would not fuffer the people to reform their fentiments and their practices according to the word of God. Thus Christianity in the primitive ages was charged by the Heathens with all the calamities which befel the Roman empire, because the Christians renounced the heathen gods and idols.

0

1

.

14

M

at

1

1

0

b

€.

d

fi

b

n

t'

t

24

fc

m

Va

The way to relieve ourselves from those sophisms, and to fecure ourselves from the danger of falling into them, is an honest and diligent enquiry into the real nature and causes of things, with a constant watchfulness against all those prejudices that might warp the judgment aside from truth in that enquiry.

V. The next is called fallacia accidentis; or a fophism, wherein we pronounce concerning the nature and effential properties of any subject, according to something which is merely accidental to it. This is a-kin to the former, and is also very frequent in human life. So, if opium or the Peruvian bark has been used imprudently or unfuccefsfully, whereby the patient has received injury, fome weaker people abfolutely pronounce against the use of the bark or opium upon all occasions whatfor ever, and are ready to call them poison. So wine has been the accidentaloccasion of drunkenness and quarrels; learning and printing may have been the accidental cause of sedition in a state; the reading of the Bible, by accident, has been abused to promote heresies or destructive errors; and for these reasons they have been all pronounced evil things. Mahomet forbad his followers the use of wine; the Turks discourage learning in their dominions; and the Papifts forbid the scripture to be read by the Laity. But how very unreasonable are these inferences, and these prohibitions which are built upon them!

VI. The next fophism borders upon the former; and that is, when we argue from that which is true in particular circumsiances to prove the same thing true absolutely, simply, and abstracted from all circumstances; this is called in the schools a sophism, a dicto secundum quid ad dictum simpliciter; as, That which is bought in the shambles is eaten for dinner; raw meat is bought in the shambles; therefore raw meat is eaten for dinner. Or thus, Livy writes fables and improbabilities when be desoribes

HI.

ms.

nto

eal

ulthe

ſm,

ind.

ing:

the

, if tly

n-

nst fo-

as ls;

tal

le,

or

en ol-

ig

re

le

re

d

n.

ie

m

11

n

e

describes prodigies and omens; therefore Livy's Roman history is never to be believed in any thing Or thus, There may be some mistake of transcribers in some part of fripture; therefore scripture aione is not a fafe guide for our faith.

This fort of fophism has its reverse also; as when we argue from that which is true fimply and absolutely, to prove the fame thing true in all particular circumstanres whatfoever"; as if a Traitor should argue from the fixth commandment, Thou shalt not kill a man, to prove that he himself ought not to be hanged : Or, if a madman should tell me, I ought not to with-hold his favord from him, because no man ought to with-hold the property of another.

These two last species of sophisms are easily solved by shewing the difference betwixt things in their absolute nature, and the fame things furrounded with peculiar circumstances, and considered in regard to special times, places, persons, and occasions; or by shewing the difference between a moral and a metaphyfical univerfality and that the proposition will hold good in one case, but not in the other . stady of bar : were writing this

VII. The fophilins of composition and division come in their clominions; and the Parbarabilitos ad or txan

shower Mahamet forbad his tol-

The fophism of composition is when we infer any thing concerning ideas in a compounded ferfe, which is in'y true in a dividuit fuft. La falamin e 1-14 in the guspel that Christ made the liend to see, and the deaf to bear, and the lame to walk, we ought not to infer hence that Christ performed contradictions; but those who were blind before were made to see, and those who were deaf before were made to hear, &c. So when the So when the scripture assures us the worst of sinners may be faved, it lignifies only that they who have been the worft of finners may repent and be faved, not that they shall be faved

This is arguing from moral universality, which admirs of some exceptions, in the fame manner as may he argued from menaphillhalfor a natural universality, which admits of no exceptions.

in their fins. Or, if any one should argue thus, Two and three are even and odd; five are two and three; therefore five are even and odd. Here that is very falfely interred concerning two and three in union, which is only true of them divided.

The fophism of division is when we infer the same thing concerning ideas in a divided fense, which is only true in a compounded fense; as, if we should pretend to prove that every soldier in the Grecian army put an hundred thousand Persians to slight, because the Grecian foldiers did fo. Or, if a man should argue thus; five is one number; two and three are five; therefore two which we are perpetually and three are one number.

This fort of fophisms is committed when the word all is taken in a collective and a distributive sense, without a due distinction; as, if any one should reason thus; All the musical instruments of the Jewish temple made a noble concert; the barp was a musical instrument of the Jewish temple; therefore the hurp made a noble concert. Here the word all in the major is collective, whereas such a conclusion requires that the word all should be distributive.

It is the same fallacy when the universal word all or no refers to species in one proposition, and to individuals in another; as, Ail animals were in Noah's ark; therefore no animals perished in the flood: Whereas in the premife, all animals fignify every kind of animals, which does not exclude or deny the drowning of a thousand individuals.

VIII. The last fort of sophisms arises from our abuse of the ambiguity of words, which is the largest and most extensive kind of fallacy; and, indeed, several of the former fallacies might be reduced to this head.

When the words or phrases are plainly equivoral, they are called fophisms of equivocation; as, if we should argue thus, He that fends forth a book into the light, desires it to be read; be that throws a book into the fire, fends it into the light; therefore he that throws a book this the fire defires it to be read.

#### C. III. § 2. The right Use of REASON. 287

This fophism, as well as the foregoing, and all of the like nature are folved by the shewing different fenfes of the words, terms, or phrases. Here light in the major proposition signifies the public view of the world; in the minor it fignifies the brightness of flume and fire; therefore the fyllogifin has four terms, or rather it has

no middle term, and proves nothing.

But where such gross equivocations and ambiguities . appear in arguments, there is little danger of imposing upon ourselves or others. The greatest danger, and which we are perpetually exposed to in reasoning, is, where the two fenses or fignifications of one term are near a-kin, and not plainly distinguished, and yet they are really sufficiently different in their sense to lead us into great mistakes, if we are not watchful. And indeed the greatest part of controversies in the facred or civil life arise from the different senses that are put upon words, and the different ideas which are included in them; as hath been shewn at large in the first part of Logick, Chap. IV. which treats of words and terms.

There is after all these, another fort of sophism which is wont to be called an imperfect enumeration, or a false induction, when from a few experiments or observations men infer general theorems and universal propolitions. But this is sufficiently noticed in the toregoing chapter, where we treated of that fort of fyl-

logism which is called induction. Anishering brillions

### of the cimble afty of in the Tvo a R the largest and most extensive kind of fallacy; and, indeed, leveral of the

MIT. The last fort of Sophifms as dest to ome pur alle.

former fallacies might be reduced to this head, Two general Tests of true Syllogisms, and Methods of they are called formfidgod the gniviol as it we should

DEfides the special description of true fillogisms and ophisms already given, and the rules by which the one are framed, and the other refuted, there are thele

Ud e ; ry

II.

les ne ly

to an

an ve

wo W

rd ſe,

on ble

ua

31he to

or als

ehe

li. 2

use oft

he

al ıld

bt,

re,

el

de

of

W

111/

ab

the

wi

are

non

for for

bot

be 1

the

cate

poli

part and bum

anin

a god

these two general methods of reducing all syllogisms

whatfoever to a test of their truth or fallhood.

I. The first is, that the premises must (at least im plicitly) contain the conclusion; or thus, one of the premifes must contain the conclusion, and the other must shew that the conclusion is contained in it. The reason of this rule is this; When any proposition is offered to be proved, it is necessary to find another proposition which confirms it, which may be called the containing proposition; but because the second must not contain the first in an express manner, and in the same words. therefore it is necessary that a third or oftensive propofition be found out to fee that the fecond proposition contain the first which was to be proved. Let us make an experiment of this fyllogism. Whosoever is a flave to his natural inclinations is miferable; the wicked man is a flave to his natural inclinations; therefore the wicked man is miserable. Here it is evident that the major proposition contains the conclusion; for under the general character of a flave to natural inclinations, a wicked man is contained or included; and the minor proposition declares it; whence the conclusion is evidently deduced that the wicked man is miserable.

In many affirmative fyllogisms we may suppose either the major or the minor to contain the conclusion, and the other to shew it; for there is no great difference. But in negative syllogisms it is the negative proposition that contains the conclusion, and the affirmative proposition shews it; as, Every wife man masters his passions; no angry man masters his passions; therefore no angry man is wife. Here it is more natural to suppose the minor to be the containing proposition; it is the minor implicitly denies wisdom concerning an angry man, because mastering the passions is included in

wisdom, and the major shews it.

It is confessed that conditional and disjunctive major propositions do expressly contain all that is in the conclusion; but it then is not in a certain and conclusive manner, but only in a dubicus form of speech, and mingled with other terms, and therefore it is not the same express proposition.

I.

18

THE e-

w

of.

be

on

ng

in

\*,

0-

on

us

a

ed

he

he er

25,

or

is

er

nd

e.

on

0is

re p-1

he

77

in 113

115

ti-

en

rm

ot

Note, This rule may be applied to complex and conjunctive, as well as simple syllogisms, and is adapted to hew the truth or fallhood of any of them.

II. The second is this; As the terms in every syllogifm are usually repeated twice, so they must be taken precisely in the same sense in both places: for the greateft part of mistakes, that arise in forming syllogisms is derived from some little difference in the sense of one of the terms in the two parts of the fyllogism wherein it is used. Let us consider the following sophisms.

1. It is a fin to kill a man; a murderer is a man; therefore it is a sin to kill a murderer. Here the word kill, in the first proposition, signifies to kill unjustly, or without a law; in the conclusion it is taken absolutely for putting a man to death in general, and

therefore the inference is not good.

2. What I am, you are not; but I am a man; therefore you are not a man. This is a relative fyllogifm: But if it be reduced to a regular categorical form, it will appear there is ambiguity in the terms, thus: What Iam, is a man; you are not what I am; therefore you are not a man. Here what I am in the major propolition, is taken specially for my nature; but in the minor proposition the same words are taken individually for my person; therefore the inference must be false, for the syllogism does not take the term what I am both times in the same sense.

3. He that fays you are an animal, fays true; but he that fays you are a goofe, fays you are an animal; therefore he that fays you are a goofe, fays true. In the major proposition, the word animal is the predicate of an incidental proposition; which incidental propolition being affirmative renders the predicate of it particular, according to Chap. II. Sect. II. Axiom 3. and consequently the word animal there signifies only human animality. In the minor proposition, the word animal, for the same reason, signifies the animality of a goofe; whereby it becomes an ambiguous term, and

th

W

th

id

fo

be

en

le

m

of (a

th

er

d

a

th

pi

e

0

n

p

115

1y

-a

n

910

unfit to build the conclusion upon. Or, if you say, the word animal in the minor, is taken for human ani-

mality, then the minor, is evidently falfe. drow How

It is from this last general test of syllogisms, that we derive the custom of the respondent in answering the arguments of the opponent, which is to distinguish upon the major or minor proposition, and declare which term is used in two senses, and in what sense the proposition may be true, and in what sense it is false.

# ting don tog bits sufficiency of the name of the first be first be

from rath judgment, before we attain just evidence of

Some general Rules to direct our Reasoning.

OST of the general and special directions given to form our judgments aright in the preceding part of Logick might be rehearfed here; for the judgments which we pass upon things are generally built on some secret reasoning or argument by which the proposition is supposed to be proved. But there may be yet some farther assistances given to our reasoning powers in their search after truth, and an observation of the following rules will be of great importance for that end.

I. Rule. Accustom yourself to clear and distinct ideas, to evident propositions, to strong and convincing arguments. Converse much with those friends, and those books, and those parts of learning where you inset with the greatest clearness of thought and force of reasoning. The mathematical sciences, and particularly Arithmetick, Geometry, and Mechanicks, abound with these advantages: and if there were nothing valuable

valuable in them for the uses of human life, yet the very speculative parts of this fort of learning are well worth our study; for by perpetual examples they teach us to conceive with clearness, to connect our ideas and propositions in a train of dependance, to reafon with strength and demonstration, and to distinguish between truth and falshood. Something of these sciences should be studied by every man who pretends to learning, and that (as Mr. Locke expresses it) not so much to make us Mathematicians, as to make us reasonable creatures.

We should gain such a familiarity with evidence of perception and force of reasoning, and get such a habit of discerning clear truths, that the mind may be soon offended with obscurity and confusion: Then we shall (as it were) naturally and with ease restrain our minds from rash judgment, before we attain just evidence of the proposition which is offered to us; and we shall with the fame ease, (and as it were) naturally seize and embrace every truth that is proposed with just evidence and Bremedired to an animaling

sudements arignaling the preceding

This habit of conceiving clearly, of judging juffly, and of reasoning well, is not to be attained merely by the happiness of constitution, the brightness of genius, the best natural parts, or the best collection of Logical precepts. It is custom and practice that must form and establish this habit. We must apply ourselves to it till we can perform all this readily, and without reflecting on rules. A coherent thinker, and a strict reasoner is not to be made at once by a fet of rules, any more than a good painter or Musician may be formed extempore, by an excellent lecture on music or painting, It is of infinite importance, therefore, in our younger years, to be taught both the value and the practice of conceiving clearly and reasoning right: For, when we are grown up to the middle of life, or past it, it is no wonder that we should not learn good reasoning, any more than that an ignorant clown thould not be able pldcolar

Aa2

ant-1971 t we the pon

III

fay,

hich -orc 1621

MIK abl per

Tio 4 111 rit.

115 ren ing dg-

ult the ay ing on

for nET ng

nd ou ce i-

nd ag le

for

ne

pic

me

to. the

op

fer

ab 25

it

re

ju 9

O

d

t

0

f

to learn fine language, dancing, or a courtly behaviour, when his rustic airs have grown up with him till the nexion of them, whereloever if as attainativito fo age

For want of this care some persons of rank and edueation dwell all their days among obscure ideas; they conceive and judgealways in confusion, they take weak arguments for demonstration, they are led away with the disguises and shadows of truth. Now, if such persons happen to have a bright imagination, a volubility of speech, and a copiousness of language, they not only impose many errors upon their own underflandings, but they flamp the image of their own miftakes upon their neighbour's also, and spread their errors abroad.

It is a matter of just lamentation and pity to consider the weakness of the common multitude of mankind in this respect, how they receive any thing into their affent, upon the least triffing grounds. True reasoning hath very little share in forming their opinions. They refift the most convincing arguments by an obstinate adherence to their prejudices, and believe the most improbable things with the greatest assurance. They talk of the abstrufest mysteries, and determine upon them with the utmost confidence, and without just evidence either from reason or revelation. A confused heap of dark and inconsistent ideas make up a good part of their knowledge in matters of philosophy as well as religion, having never been taught the ule and value of clear and just reasoning.

Yet it must be still confessed, that there are some mysteries in religion, both natural and revealed, as well as some abstruse points in philosophy, wherein the wise as well as the unwife must be content with obscure There are feveral things, especially relating to the invisible world, which are unsearchable in our prefent state, and therefore we must believe what revelation plainly dictates, though the ideas may be obscure. Reason

III.

our.

the

nex

du-

hev

eak

vith

uch

lu-

hey

er-

if-

eir

G-

nd

eir

n-

is.

6.

ne

e.

ne .

it

1-

a

y

Reason itself demands this of us; but we should seek for the brightest evidence both of ideas, and of the connexion of them, wheresoever it is attainable.

II. Rule. Enlarge your general acquaintance with things daily in order to attain a rich furniture of topics, or middle terms, whereby those propositions which accur, may be either proved or disproved; but especially mediate and enquire with great diligence and exactness into the nature, properties, circumstances, and relations of the particular subject about which you judge or argue. Consider its causes, esfects, consequences, adjuncts, opposites, signs, &c. so far as is needful to your present purpose. You should survey a question round about, and on all sides, and extend your views as far as possible, to every thing that has a connexion with it. This practice has many advantages in it; as,

1. It will be a means to tuggest to your mind, proper topics for argument, about any proposition that relates to the same subject.

2. It will enable you with greater readiness and justness of thought, to give an answer to any sudden question upon that subject, whether it arises in your own mind, or be proposed by others.

3. This will instruct you to give a plainer and speedier solution of any difficulties that may attend the theme of your discourse, and to resute the objections of those who have espoused a contrary opinion.

4. By such a large survey of the whole subject in all its properties and relations, you will be better secured from inconsistencies; i. e. from afferting or denying any thing in one place, which contradicts what you have afferted or denied in another: And to attain these ends, an extensiveness of understanding and a large memory are of unspeakable service.

One would be ready to wonder sometimes how easily great, wise, and learned men are led into affertions in some parts of the same Treatise, which are sound to

A a 3

be.

Smilling S

ni

-

f

1

h

b

t

C

q

b

t

a

fe

u

ti

a

a

t

b

C

be scarce confistent with what they have afferted in other places: But the true reason is the narrowness of the mind of man, that it cannot take in all the innumer. able properties and relations of one subject with a fingle view; and therefore whilft they are intent on one particular part of their theme, they bend all their force of thought to prove or disprove some proposition that relates to that part, without a sufficient attention to the consequences which may flow from it, and which may unhappily affect another part of the same fubject, and by this means they are fometimes led to fay things which are inconfistent. In such a case, the great dealers in dispute and controversy, take pleasure to cast nonfense and self-contradiction on their antagonist with huge and hateful reproaches. For my part, I rather chuse to pity human nature, whose necessary narrowness of understanding exposes us all to some degrees of this frailty. But the most extensive survey possible of our whole subject, is the best remedy against it. It is our judging and arguing upon a partial view of things, that exposes us to mistakes, and pushes us into absurdities, or at least to the very borders of them.

III. RULE. In fearching the knowledge of things, always keep the precise point of the present question in your eye. Take heed that you add nothing to it while you are arguing, nor omit any part of it. Watch carefully lest any new ideas slide in to mingle themselves either with the subject or the predicate. See that the question be not altered by the ambiguity of any word taken in different senses; nor let any secret prejudices of your own, or the sophistical arts of others, cheat your understanding by changing the question, or shuffling in any thing else in its room.

And for this end it is useful to keep the precise matter of enquiry as simple as may be, and disengaged from a complication of ideas, which do not necessarily belong to it. By admitting a complication of ideas, and taking too many things at once in one question, the mind

is

n

of

141

a

n

ir

n

n

nd ne

to

ne

re

ift I

ry

e-

ey

W

us n.

29

ur

est

ith

be if-

ur

nin

dim

at-

om

ng k-

is

is fometimes dazzled and bewildered; and the truth is lost in such a variety and confusion of ideas; whereas by limiting and narrowing the question, you take a fuller survey of the whole of it.

By keeping the fingle point of enquiry in our conflant view, we shall be secured from sudden, rash, and impertinent responses and determinations, which some have obtruded instead of solutions and solid answers,

before they perfectly knew the questions.

IV. RULE. When you have exactly considered the precise point of enquiry, or what is unknown in the question, then consider what, and how much you know already of this question, or of the ideas and terms of which it is composed. It is by a comparison of the known and unknown parts of the question together, that you find what reference the part known hath unto, or what connexion it hath with the thing that is sought; those ideas, whereby the known and unknown parts of the question are connected, will furnish you with middle terms or arguments whereby the thing proposed may be proved or disproved.

In this part of your work, viz. comparing ideas together, take due time, and be not too hasty to come to a determination, especially in points of importance. Some men, when they see a little agreement or disagreement between ideas, presume a great deal, and so jump into the conclusion: This is a short way to fancy, opinion, and conceit, but a most unsafe and

uncertain way to true knowledge and wisdom.

Pikelnmeering

V. Rule. In choosing your middle terms or arguments to prove any question, always take such topics as are surest, and least fallible, and which carry the greatest evidence and strength with them. Be not so solicitous about the number, as the weight of your arguments, especially in proving any proposition which admits of natural certainty, or of complete demonstration. Many times we do injury to a cause by dwelling upon trising arguments.

guments. We amuse our hearers with uncertainties, by multiplying the number of feeble reasoning, before we mention those which are more substantial, conclusive, and convincing. And too often we yield up our own affent to mere probable arguments, where certain proofs may be obtained.

Yet it must be confessed there are many cases, wherein the growing number of probable arguments increases the degree of probability and gives a great and sufficient

confirmation to the truth which is fought; as,

word or phrase, we are more confirmed in the signication of it, by finding the same expression so used in several authors, or in several places of the same author.

a

by

68

as

20

ſh

(o

th

un

it

otl

the

Vai

giv

to

pro

chie

be 1

thin

mol

diG

nece

(2.) When we are fearching out the true meaning or opinion of any writer, or enquiring into any facred doctrine of scripture, we come to a surer determination of the truth by several dictinct places wherein the same thing is expressed or plainly implied; because it is not so probable that an honest skilful reader should mistake the meaning of the writer in many places, as he may in one or two.

(3) When we would prove the importance of any feriptural doctrine or duty, the multitude of texts, wherein it is repeated and inculcated upon the reader, feems naturally to instruct us that it is matter of greater importance, than other things which are but

flightly or fingly mentioned in the Bible.

(4) In fearching out matters of fact in times past, or in distant places, (in which case moral evidence is sufficient, and moral certainty is the utmost which can be attained) here we derive a greater assurance of the truth of it by a number of persons, or a multitude of circumstances concurring to bear witness to it.

(5.) From many experiments in natural philosophy, we more safely infer a general theorem, than we can

from one or two.

(6.) In matters which require present practice, both facred and civil, we must content ourselves oftentimes with

17

41

5

t

n 

g

n

e

ot.

93

y

641 ıy

S,

17

of.

ut

ft,

is an

the

of

hy,

an

oth

nes vith

with a mere preponderation of probable reasons or arguments. Where there are several reasons on each fide, for and against a thing that is to be done or omitted, a small argument added to the heap may justly turn the balance on one fide, and determine the judgment, as I have noted in the second Part of Logick.

To conclude; a growing acquaintance with matters of learning, and a daily improvement of our understandings in affairs human and divine, will best teach us to judge and diffinguish in what cases the number of arguments add to their weight and force: it is only experience can fully inform us when we must be determined by probable topicks, and when we must feek

and expect demonstrations.

VI. RULE. Prove your conclusion (as far as possible) by some propositions that are in themselves more plain, evident, and certain than the conclusion; or at least such as are more known, and more intelligible to the person whom you would convince. If we neglect this rule, we shall endeavour to enlighten that which is obscure, by fomething equally or more obscure, and to confirm that which is doubtful by fomething equally or more uncertain. Common sense dictates to all men, that it is impossible to establish any truths, and to convince others of it, but by fomething that is better known to them than that truth is.

VII. RULE. Labour in all your arguings to enlighten the understanding, as well as to conquer and captivate the judgment. Argue in such a manner as may give a natural, distinct, and folid knowledge of things to your hearers, as well as to force their affent by a mere proof of the question. Now, to attain this end, the chief topic or medium of your demonstration should be fetched as much as possible, from the nature of the things to be proved, or from those things which are most naturally connected with it.

Geometricians fometimes break this rule without recedity, two ways, viz.noo flum on him barosi

to

re

re

fin

th

er

th

th ed

qu

of

for

ufe

tru

We

fig

affi

r. When they prove one proposition only by shewing what abfurdities will follow, if the contradictory proposition be supposed or admitted. This is called. Reductio ad absurdum\*, or Demonstratio per impossibile; as for instance, when they prove all the radii of a circle to be equal, by supposing one radius to be longer or fhorter than another, and then fhewing what abfurd This, I confefs, forces the confequences will follow. affent, but it does not enlighten the mind by shewing the true reason and cause why all radii are equal, which is derived from the very construction of a circle: For fince a circle is formed by fixing one end of a strait line in the centre, and moving the other end round, (or, which is all one, by compasses kept open to a certain extent) it follows evidently that every part of the circumference being thus described must be equally distant from the centre, and therefore the radii, which are lines from the centre, to the circumference, must be

2. Geometricians forget this rule when they heap up many far-fetched lines, figures, and proportions to prove some plain, simple, and obvious proposition. This is called a demonstration per aliena et romota, or an argument from unnatural and remote mediums : As if in order to prove the radii of a circle are all equal, I should make several triangles and squares about the circle, and then from some properties and propositions of squares and triangles prove that the radii of a circle Par dans marketton

are equal.

Yet it must be confessed, that sometimes such questions happen, that it is hardly possible to prove them by direct arguments drawn from the nature of things, is conclutive sequences.

Yet tet 200 noted deresthat a parable of a fibrilland

Note, This rule chiefly refers to the effablifhment of fometruth, rather than to the refutation of error. It is a very common and useful way of arguing to refute a falle proportion, by thewing what evident fallhood or abfordity will follow from it. For what proposition soever is really absurd and false, does effectually prove that principle to be false from which it is derived; so that this way of refuting an error is not fo usually called reductio ad abfurdum.

15

-

r

d e g

h

or

it

1,

-

ie

1-

h

be

p

to

n.

or

18

il

he

ns

cle

-1-

m

75, Pc.

th, ind

ing

For

dly hat &c. and then it may not only be lawful, but necessary to use indirect proofs, and arguments drawn from remote mediums or from the absurdity of the contradictory suppolitions.

Such indirect and remote arguments may also be fometimes used to confirm a proposition which has been before proved by arguments more direct and im-

VIII. RULE. Though arguments should give light to the subject, as well as constrain the assent, yet you must learn to distinguish well between an explanation and an argument; and neither impose upon yourselves, nor suffer yourselves to be imposed upon by others, by mistaking a mere illustration for a convincing reason,

Axioms themselves, or self-evident propositions, may want an explication or illustration, though they are not

to be proved by reasoning. Or so these art most send one

Similitudes and allusions have oftentimes a very happy influence to explain some difficult truth, and to render the idea of it familiar and easy. Where the resemblance is just and accurate, the influence of a fimile may proceed so far as to shew the possibility of the thing in question : But similitudes must not be taken as a folid proof of the truth or existence of those things to which they have a refemblance. A too great deference paid to similitudes, or an utter rejection of them feem to be two extremes, and ought to be avoid-The late ingenious Mr. Locke, even in his enquiries after truth, makes great use of sonilies for frequent illustration, and is very happy in the invention of them, though he warns us also lest we mistake them for conclusive arguments.

Yet let it be noted here, that a parable or a similitude used by any author, may give a sufficient proof of the true fense and meaning of that author, provided that we draw not this similitude beyond the scope and defign for which it was brought; as when our Saviour affirms, Rev. 3. I will come on thee as a thief; this

will plainly prove that he describes the unexpettedness of his appearance, though it will by no means be drawn to fignify any injustice in hi. design.

IX. RULE. In your whole course of reasoning keep up your mind sincerely intent in the pursuit of truth; and sollow solid argument wheresoever it leads you. Let not a party spirit; nor any passion or prejudice whatsoever, stop or avert the current of your reasoning, in quest of

true knowledge.

When you are enquiring therefore into any subject, maintain a due regard to the arguments and objections on both sides of a question: Consider, compare, and balance them well before you determine for one fide. It is a frequent, but a very faulty practice to hunt after arguments only to make good one fide of a question, and entirely to neglect and refuse those which favour the other side. If we have not given a due weight to arguments on both fides, we do but wilfully mifguide our judgment, and abuse our reason, by forbidding its fearch after truth. When we espouse opinions by a fecret biass on the mind through the influences of fear, hope, honour, credit, interest, or any other prejudice, and then feek arguments only to support those opinions, we have neither done our duty to God nor to ourselves; and it is a matter of mere chance if we stumble upon truth in our ways to ease and preferment. The power of reasoning was given us by our Maker for this very end, to purfue truth; and we abuse one of his richest gifts, if we basely yield it up to be led astray by any of the meaner powers of nature, or the perishing interests of this life. Reason itself, if honestly obeyed, will lead us to receive the divine Revelation of the gospel, where it is duly proposed, and this will thew us the path of life everlasting. contument darkt

THIP Has even of the brightest genius was despited the

to

to

01

ru

stake, symch may tidably attend the modifications and

a state of the state of the state of the winds of the

appearance applied it will by to recent be drawn

An apply Laturglace for applying a proper and the contract of the contract of

TIT 14KET

Π.

ess

n

Up

ot r,

t,

d e.

r

ı,

s

0

site parts of truth; and a company of truth; and company of the contract to th

## FOURTH PART

to flough of againstant pays to make a but the season

to green there are not not not the termination of the state.

## LOGICK:

Of Disposition and Method.

and the second of the state of the second of

รับ 16 โดยที่เกี่ยว โดยที่ผู้รับกลายกาลการ พื้นข้องที่ได้ เลื่องกับ พ.ศ.การที่สามารถใช้จะรับก็เลือง เดือนพากสามารถที่สามารถสามารถ

IT is not merely a clear and distinct idea, a well-formed proposition, or a just argument that is sufficient
to search out and communicate the knowledge of a
subject. There must be a variety and series of them
disposed in a due manner, in order to attain this end:
And therefore it is the design of the last part of Logick
to teach us the art of method. It is that must secure
our thoughts from that confusion, darkness, and mistake, which unavoidably attend the meditations and
discourses even of the brightest genius who despites the
rules of it.

ВЬ

I. We

1

io

1. We shall here consider the nature of method, and

she several kinds of it.

2. Lay down the general rules of method, with a few particulars under them.

and leads or ward to the knowledge of the whole it is

truths, and proceeds by Jeffers that which is drawn from them or compounded of them; and therefore it is

#### called the mathed of ... 'A AHO

Of the Nature of Method, and the Several Kinds of it, viz. Natural and Arbitrary, Synthetic and Analytic.

METHOD, taken in the largest sense, implies the placing of several things, or performing several operations in such an order as is most convenient to attain some end proposed: And in this sense it is applied to all the works of nature and art, to all the divine affairs of creation and providence; and to the artifices, schemes, contrivances, and practices of mankind, whether in natural, civil, or sacred affairs.

Now, this orderly disposition of things includes the ideas of prior, posterior, and simultaneous; of superior, inferior, and equal; of beginning, and, and middle, &c. which are described more particularly among the gene-

ral affections of being in ontology. A standard to accept ved

But, in Logick, method is usually taken in a more limited sense, and the nature of it thus described: Method is the disposition of a variety of thoughts on any subject, in such order as may best serve to find out unknown truths, to explain and confirm truths that are known, or to six them in the memory.

It is distributed into two general kinds, (viz.) Na-

tural and arbitrary.

Natural method is that which observes the order of nature, and proceeds in such a manner, as that the knowledge

nd

ew

16

71

it,

1

he

e-

un

all

of

35,

in

he

r,

c.

10-

re

e-

b-

un

or

1-

ol

10

re

knowledge of the things which follow, depends in a great measure on the things which go before; and this is two-fold, (viz) Synthetic and Analytic, which are sometimes called Synthesis and Analysis.\*

Synthetic method is that which begins with the parts, and leads onward to the knowledge of the whole: † it begins with the most simple principles, and general truths, and proceeds by degrees to that which is drawn from them or compounded of them; and therefore it is called the method of composition.

Analytic method takes the whole compound as it finds it, whether it be a species or an individual, and leads us into the knowledge of it by resolving it into its first principles or parts, its generic nature, and its B b 2 special

The word Analysis has three or four senses, which it may not be improper to take notice of here.

r. It fignifies the general and particular heads of a discourse, with their mutual connexions, both co-ordinate and subordinate, drawn out by way of abstract into one or more tables, which are frequently placed like an Index. at the beginning or end of a book.

2. It figuifies the refolving of a discourse into its various subjects and arguments, as when any writing of the ancient Prophets is resolved into the prophetical, bistorical, dostrinal and practical parts of it; it is said to be analysed in general. When a sentence is distinguished into the Nouns, the Verbs, Pronouns, Adverbs, and other Particles of speech which compose in, then it is said to be enalysed grammatically. When the same sentence is distinguished into subject and predicate, proposition, argument, all, object, cause, essentially. This last is what is chiefly meant in the ebeological schools, when they speak of onalysing a text of scripture.

3. Analysis fignifies particularly the science of Algebra, wherein a question being proposed, one or more letters, as, x, y, z; or vowels, as a, e, i, &c. are made use of to signify the unknown number, which being intermingled with several known numbers in the question, is at last by the rules of art separated or released from that entanglement, and its particular value is sound out by shewing its equation, or equality to some known numbers

4. It fignifies Analytical method, as here expressed in Logical Analytical method, as here expressed in Logical Analytical method, as here expressed in Logical Analytical Analytical States and proceeds to the species and individuals. But the genus or generic nature is then confidered only as a physical or effential part of the species, though it be sometimes called an universal or logical whole. If hus synthetic-method maintains its own description still, for it begins with the parts, and proceeds to the subole, which is compased to them.

k

b

iı

C

r

C

ai

th

special properties; and therefore it is called the method when we have by anan/is lound out a rout moistiffer to

As synthetic method is generally used in teaching the sciences after they are invented, so analytic is most practifed in finding out things unknown. Though it must be confessed that both methods are sometimes employed to find out truth and to communicate it. 13 and stand

If we know the parts of any subject easier and better. than the whole, we consider the parts diffinctly, and by putting them together we come to the knowledge of the whole. So in Grammar we learn first to know letter, we join them to make syllables, out of syllables we compose words, and out of words we make fentences and discourses. So the Physician or Apothecary knows the nature and powers of his fimples, (viz.) his drugs, his berbs, his minerals, &c. and putting them together, and confidering their feveral virtues, he finds what will be the nature and powers of the bolus, or any compound medicines. This is the fynthetic method.

But if we are better acquainted with the whole than we are with particular parts, then we divide or refolve the whole into its parts, and thereby gain a distinct knowledge of them. So in vulgar life we learn in the gross what plants or minerals are; and then by chemistry we gain the knowledge of falt, fulphur, spirit, water, earth, which are the principles of them. So we are first acquainted with the whole body of an animal, and then by anatomy, or diffection, we come to learn all the inward and outward parts of it. This is

analytic method.

According to this most general and obvious idea of synthetic and analytic method, they differ from each other as the way which leads up from a valley to a mountain differs from itself, considered as it leads down from the mountain to the valley; or as St. Matthew and St. Luke; prove Christ to be the Son of Abraham; Luke finds out by analysis, rising from Christ to his ancestors; Matthew teaches it in fruthetic method, beginning from Abraham, and shewing that Christ is found among his posterity. dividuals...

nd

W

16

12

ft

er.

d

of

W

es

y

IS

n ls

y

n

f

61

1,

0

-

5

f

r

7,

5

1

14

when we have by analysis found out a truth, we use synthetic method to explain and deliver it, and prove it to be true.

In this easy view of things, these two kinds of method may be preserved conspicuously, and entirely distinct: But the subjects of knowledge being infinite, and the ways whereby we arrive at this knowledge being almost infinitely various, it is very difficult, and almost impossible, always to maintain the precise distinction between these two methods.

This will evidently appear in the following obser-

we compole wirds and out of words see makening

Obs. I. Analytic method being used chiefly to find out things unknown, it is not limited or confined merely to begin with some whole subject, and proceed to the knowledge of its parts, but it takes its rise sometimes from one single part or property, or from any thing whatsoever that belongs to a subject which happens to be first and most easily known, and thereby enquires into the more abstruse and unknown parts, properties, causes, effects, and modes of it, whether absolute or relative: as for instance,

in the speculative part of natural philosophy, when we observe light, colours, motions, hardness, softness, and other properties and powers of bodies, or any of the common or uncommon appearances of things either on earth, or in heaven, we search out the causes of them. So by the various creatures we find out the Creator,

and learn his wisdom, power, and goodness.

(2.) It finds out effects by their causes. So the practical and mechanical part of natural philosophy confiders such powers of motion as the wind, the fire, and the water, &c. and then contrives what uses they may be applied to, and what will be their effects in order to make mills and engines of various kinds.

(3.) It finds out the general and special nature of a thing, by considering the various attributes of the individuals.

B b 3 dividuals.

71

tl

dividuals, and observing what is common, and what is proper, what is accidental, and what is effential. So by furveying the colour, the shape, motion, reft, place, folidity, extension of bodies, we come to find that the nature of body in general is folid extension; because all other qualities of bodies are changeable, but this belongs to all bodies, and it endures through all changes; and because this is proper to a body alone, and agrees not to any thing elfe; and it is the foundation of all other properties. desert of semistate and may him being

(4.) It finds out the remaining properties or parts of a thing, by having some parts or properties given: fo the area of a triangle is found by knowing the beight and the base. So by having two sides, and an angle of a triangle given, we find the remaining fide and angles. So, when we know cogitation is the prime attribute of a spirit, we infer its immateriality, and thence

its immortality: suglibization to be suggested a same

(5.) Analysis finds the means necessary to attain a proposed end by having the end first assigned. So in moral, political, acconomical affairs, having proposed the government of felf, a family, a fociety, or a nation, in order to their best interest, we consider and search out what are the proper laws, rules, and means to effect it. So in the practices of artificers, and the manufactures of various kinds, the end being proposed, as making cloth, houses, ships, &c. we find out ways of composing these things for the several uses of human life. But the putting any of these means in execution to attain the end, is synthetic method.

Many other particulars might be represented, to shew the various forms of analytic method; whereby truth is found out, and some of them come very near

to funthetic, fo as hardly to be distinguished.

Obf. II. Not only the investigation of truth, but the communication of it also is often practised in such a method, as neither agrees precifely to synthetic or analytic. Some sciences, if you consider the whole of them in general as treated in funthetic order; so physics or natural 8

O

3

e

1

5

5

f

t

e

-

e

a

d

7

S

n

n

O

r

e

a

H

T

tural philosophy, begins usually with an account of the general nature and properties of matter or bodies, and by degrees descends to consider the particular species of bodies, with their powers and properties; yet it is very evident, that when philosophers come to particular plants and animals, then by chemistry and anatomy they analyse or resolve those bodies into their several constituent parts. On the other hand, Logick is begun in analytic method: the rubsle is divided into its integral parts, according to the four operations of the mind; yet here and there synthetic method is used in the particular branches of, for it treats of ideas in general first, and then descends in the several species of them; it teaches how propositions are made up of ideas, and fyllogisms of propositions, which is the order So, when we know gog me from a nontrioned

The ancient scholastic writers have taken a great deal of pains, and engaged in useless disputes about these two methods, and after all have not been able to give such an account of them as to keep them entirely distinct from each other, neither in the theory nor in the practice. Some of the moderns have avoided this confusion in some measure, by confining themselves to describe almost nothing else but the synthetic and analytic methods of Geometricians and Algebraiss, whereby they have too much narrowed the nature and rules of method, as though every thing were to be treated in ma-

compoling these things for the sever amfol lastingth

Upon the whole, I conclude, that neither of these two methods should be too scrupulously and superstitiously pursued, either in the invention or in the communication of knowledge. It is enough if the order of nature be but observed, in making the knowledge of things following, depend on the knowledge of the things which go before. Oftentimes a mixed method will be found most effectual for these purposes; and indeed a wise and judicious prospect of our main end and design must regulate all method whatsoever.

Here the rules of natural method ought to be propo-

n

t t

0

C

20 fu

21

to

fin

in

th

lit

the thi

the

20

the the

rat

fed, (whether it be analytic, or synthetic, or mixt;) but it is proper first to give some account of arbitrary mes thod, left it be thrust at too great distance from the first mention of it.

Arbitrary method leaves the order of nature, and accommodates itself to many purposes; such as, to treafure up things, and retain them in memory; to harangue and persuade mankind to any practice in the religious or the civil life; or to delight, amuse, or entertain the mind.

As for the affiftance of the memory, in most things, a natural order has an happy influence; for reason itself deducing one thing from another, greatly affifts the memory by the natural connexion and mutual dependance of things. But there are various other methods which mankind have made use of for this purpose, and indeed there are some subjects that can hardly be redu-

ced to analysis or synthesis.

In reading or writing hiftery, fome follow the order of the governor of a nation, and dispose every tranfaction under their particular reigns: So the facred books of Kings and Chronicles are written. Some write in annals or journals, and make a new chapter of every year. Some put all those transactions together which relate to one Subject; that is, all the affairs of one war, one league, one confederacy, one council, &c. though it lasted many years, and under many rulers.

So in writing the lives of men, which is called biography, some authors follow the track of their years, and place every thing in the precise order of time when it occurred: Others throw the temper and character of the persons, their private life, their public stations, their personal occurrences, their domeflick conduct, their speeches, their books or writings, their sickness and death,

into so many distinct chapters.

In chronology, some writers make their epochas to begin all with one letter: So in the book called Ductor Historicus, the periods all begin with C; as creation, cataclysm, or deluge, Chaldean empire, Cyrus, Christ,

Constantine,

O

202

eil

on-

III

DE

UV

ja.

UI.

11

alli f

e)

III 3

t dj.

00

DG. ui

13

Ш

fo

M

ID,

117

n!

11

FL)

dì 11

ij

16

12

67

Constantine, &c. Some divide their accounts of time according to the four great monarchies, Affyrian, Perhan, Grecian, and Roman. Others think it serves the memory best to divide all their subjects into the remarkable number of sevens; so Prideaux has written an Introduction to History. And there is a book of divinity called Fasciculus Controversiarum, by an author of the same name, written in the same method, wherein every controverly has feven questions belonging to it; though the order of nature feems to be too much neglected by a confinement to this feptenary number.

Those writers and speakers, whose chief business is to amuse or delight, to allure, terrify, or persuade mankind, do not confine themselves to any naturalorder, but in a cryptical or bidden method adapt every thing to their defigned ends. Sometimes they omit those things which might injure their defign, or grow tedious to their hearers, though they feem to have a neceffary relation to the point in hand: Sometimes they add those things which have no great reference to the subject, but are suited to allure or refresh the mind and the ear. They dilate sometimes, and flourish long upon little incidents, and they skip over, and but lightly touch the drier part of their theme. They place the first things last, and the last things first, with wondrous art, and yet so manage it as to conceal their artifice, and lead the fenses and passions of the hearers, into a pleasing and powerful captivity.

It is chiefly poefy and oratory that require the practice of this kind of arbitrary method: They omit things essential, which are not beautiful; they insert little needless circumstances and beautiful digressions, they invert times and actions, in order to place every thing in the most affecting light; and for this end in their practice they neglect all logical forms; yet a good acquaintance with the forms of Logick and natural methed, is of admirable use to those who would attain these arts in persection. Hereby they will be able to range their own thoughts in such a method and scheme

part of your discourse.

(

K

17

p

if

iı

11

n

e

ai

0

as to make a more large and comprehensive furvey of their subject and design in all the parts of it; and by this means they will better judge what to chuse and what to refuse; and how to dress and manage the · whole scene before them, so as to attain their own ends with greater glory and fuccess. The standing with greater glory and fuccess. and take the laure tare of all other ercockneys that have

a powerful and spreading with and a torough the feveral

For want of this care former mes a far le treatife bas been Written an a long deduction of thanked femiles hier one or two doubtful praciples, watch principles have

#### been effectively terlited in a rew time wand these the Abgral wir ol goon C.H.A.P. II. I and skieger slow

The Rules of Method, general and special.

and taired building hoks and tugsbled to the growlid.

2 It is a very adviscable, thing that your HE general requisites of true method in the purfuit or communication of knowledge, may be all comprised under the following heads. It must be, 1. Safe, 2. Plain and eafy. 3. Distinct. 4. Full, ot without Defect. 5. Short or without Superfluity. 6. Proper to the Subject and the Design. 7. Connected. evidence, and with a firmer certainty, than it you

- I. RULE. Among all the qualifications of a good method, there is none more necessary and important than that it should be fafe and secure from error; and to this end these four particular, or special directions should be observed.
- 1. Use great care and circumspection in laying the foundations of your discourse, or your scheme of thoughts upon any subject. These propositions which are to stand as first principles, and on which the whole argument depends, must be viewed on all sides with utmost accuracy, lest an error being admitted there, should diffuse itself through the whole subject. See therefore that your general definitions or descriptions are as accurate as the nature of the thing will bear ! fee ferile,

è

S

B

q.

0

11

IR.

1

r-

be

e,

ot

6.

d.

od

nt

nd

2725

the

hts

to

ar-

ut-

re,

See

ons

fee

hat

inni

that your general divisions and distributions be just and exact, according to the rules given in the first part of Logick: see that your Axioms be sufficiently evident, so as to demand the assent of those that examine them with due attention. See that your first and more immediate consequences from these principles be well drawn; and take the same care of all other propositions that have a powerful and spreading influence through the several part of your discourse.

For want of this care sometimes a large treatise has been written by a long deduction of consequences from one or two doubtful principles, which principles have been effectually refuted in a few lines: and thus the whole treatife has been deftroyed at once; so the largest and fairest building finks and tumbles to the ground, if the foundations and corner-stones of it are feeble and infufficient.

2. It is a very adviseable thing that your primary and fundamental propositions be not only evident and true, but they should be made a little familiar to the mind by dwelling upon them before you proceed farther. By this means you will gain fo full an acquaintance with them, that you may draw consequences from them with much more freedom, with greater variety, brighter evidence, and with a firmer certainty, than if you have but a flight and fudden view of them.

3. As you proceed in the connexion of your arguments, fee that your ground be made firm in every flep. See that every link of your chain of reasoning be strong and good: for, if but one link be but feeble and doubtful, the whole chain of argument feels the weakness of it, and lies exposed to every objector, and the original question remains undetermined.

4. Draw up all your propositions and arguments with so much caution, and express your ideas with such a just limitation as may preclude or anticipate any objections. Yet remember this is only to be done as far as it is possible, without too much entangling the question, or introducing complicated ideas, and obscuring the lenie.

1

C

11

h

to

O

0

is

co

ou

kej

Di

fense. But if such a cautious and limited dress of the question should render the ideas too much complicated, or the sense obscure, then it is better to keep the argument more simple, clear, and easy to be understood, and afterwards mention the objections distinctly in their full strength, and give a distinct answer to them

II. Rule. Let your method be plain and eafy, fo that your hearers or readers, as well as yourfelf, may run through it without embarrassiment, and may take a clear and comprehensive view of the whole scheme. To this end the following particular directions will be useful.

1. Begin always with those things which are best known, and most obvious, whereby the mind may have no difficulty or fatigue, and proceed by regular and edsy steps to things that are more difficult. And as far as possible, let not the understanding, nor the roof of any of our positions depend on the positions that follow, but always on those which go before. It is matter of wonder that in so knowing an age as this, there should be so many persons offering violence daily to this rule, by teaching the Latin language by a grammar written in Latin, which method seems to require a perfect knowledge of an unknown tongue, in order to learn the Rudiments of it.

2. Do not affect excessive haste in learning or teaching any science, nor hurry at once into the midst of it, lest you be too foon involved in several new and strange ideas and propositions, which cannot be well understood without a longer and closer attention to those which go before. Such sort of speed is but a waste of time, and will constrain you to take many steps backwards again, if you would arrive at a regular and complete knowledge of the subject.

3. Be not fond of crowding too many thoughts and reasonings into one sentence or paragraph, beyond the apprehension or capacity of your readers or hearers.

There

ne

d,

1-

hd

III

fo

ay

ke

re.

be

cft

no

aly

28

of

ut

of

ald

le,

in

w-

u-

ch-

it,

ige

er-

ofe

of ck-

m-

and

ap-

ere

There are some persons of a good genius, and a capacious mind, who write and speak very obscurely upon this account; they affect a long train of dependencies before they come to a period; they imagine that they can never fill their page with too much sense; but they little think how they bury their own best ideas in the croud, and render them in a manner invisible and use-less to the greatest part of mankind. Such men may be great scholars, yet they are but poor teachers.

4. For the same reason, avoid too many subdivisions. Contrive your scheme of thoughts in such a manner as may finish your whole argument with as few inferior branchings as reason will admit; and let them be such as are obvious and open to the understanding that they may come within one fingle view of the mind. will not only affift the understanding to receive, but it will aid the memory also to retain truth; whereas a discourse cut out into a vast multitude of gradual subordinations has many inconveniences in it; it gives pain to the mind and memory, in furveying and retaining the scheme of discourse, and exposes the unskilful hearers to mingle the superior and inferior particulars together, it leads them into a thick wood instead of open day-light, and places them into a labyrinth instead of a plain path.

5. Give all diligence in your younger years to obtain a clear and easy way of expressing your conceptions, that your words as fast as you utter them, may stamp your own ideas exactly on the mind of the hearer. This is a most happy talent for the conveyance of truth, and an excellent security against mistakes and needless

which on between back fort of food

controversies.

III. RULE. Let your method be distinct and without the perplexing mixture of things that ought to be kept separate, and this will be easily practised by sour Directions.

Cc

I. Do

into your discourse on any subject; that is, do not mingle an argument on one subject with matters that relate entirely to another, but just so far as it is necessary to give a clearer knowledge of the subject in hand. Examples in Logick, may be borrowed from any of the sciences to illustrate the rules: But long interpositions of natural philosophy, of the imagination and fassions, of agency of spirits united to bodies, &c. break the thread of discourse, and perplex the subject.

2. Let every complicated theme or idea be divided into its distinct single parts, as far as the nature of the subject, and your present design requires it. Though you must not abound inneedless subdivisions, yet something of this work is very necessary; and it is a good judgment alone can dictate how far to proceed in it, and when to

stop.

quitribusions

Compound ideas must be reduced to a simple form in order to understand them well. You may easily master that subject in all the parts of it by a regular succession, which would confound the understanding to survey them at once. So we come to the knowledge of a very perplexed diagram in Geometry, or a complicated machine in mechanics, by having it parcelled out to us into its several parts and principles, according to

this, and the foregoing rule of method. How

3. Call every idea, proposition, and argument to its proper class, and keep each part of the subject in its own place. Put these things altogether that belong to one part or property, one consideration or view of your subject. This will prevent needless repetitions, and keep you from intermixing things which are different. We must maintain this distinction of things and places if we would be safe from error. It is consuston that leads us into endless mistakes, which naturally arise from a variety of ideas ill-joined, ill-sorted, or ill-disposed. It is one great use of method, that a multi-tude

<sup>\*</sup> Things of one kind are called bomogeneous, things of different kinds are called beterogeneous.

ter

gle

ate

to

X-

ci-

of

of

ad

nto

b-

ou

ng

nt

m

3-

Ca

to

90

it-

to

to

its

un

ne

ur nd

it.

es

at

6

ide

nt

tude of thoughts and propolitions may be so distinctly ranged in their proper situations, that the mind may not be overwhelmed with a confused attention to them all at once, nor be distracted with their variety, not be tempted to unite things which ought to be separated, nor to disjoin things which should be united.

4. In the partition of your discourse into distinct heads, take heed that your particulars do not interfere with the general, nor with each other. Think it not enough that you make use of distinct expressions in each particular, but take care that the ideas be distinct also. It is mere foolery to multiply distinct particulars in treating of things, where the difference of your particulars lies only in names and words.

IV. RULE. The method of treating a subject should be plenary or full, so that nothing may be wanting; nothing which is necessary or proper should be omitted.

pass by, nor skip over any thing in it which is very

difficult or obscure.

When you enumerate the parts or the properties of any subject, do it in a complete and comprehensive manner.

When you are afferting or proving any truth, fee that every doubtful or disputable part of the argument

be well supported and confirmed.

If you are to illustrate or argue a point of difficulty, be not too scanty of words, but rather become a little copious and diffusive in your language: Set the truth before the reader in several lights, turn the various sides of it to view, in order to give a full idea and simm evidence of the proposition.

When you are drawing up a narrative of any matter of fact, see that no important circumstance be omitted.

When you propose the folution of any difficulty, confider all the various cases wherein it can happen, and shew how they may be solved.

In short, let your enumerations, your divisions, and C c 2 distributions

distributions of things be so accurate, that no needful

part or idea be left out.

This fulness of method does not require that every thing thould be faid which can be faid upon any fubject; for this would make each fingle science endless: But you should fay every thing which is necessary to the defign in view, and which has a proper and direct tendency to this end; always proportioning the amplitude of your matter, and the fulness of your discourse to your great design, to the length of your time, to the convenience, delight, and profit of your hearers.

V. RULE. As your method must be full without deficiency, so it must be short, or without superfluity. The fulness of a discourse enlarges our knowledge, and the well-concerted brevity laves our time. order to observe this rule, it will be enough to point out the chief of those superfluities or redundances, which some persons are quitty of in their discourses, with a

due caution against them.

1. Avoid all needless repetitions of the same thing in different parts of your discourse. It must be confessed there are several cases wherein a review of some foregoing proposition is needful to explain or prove several of the following positions; but let your method be so contrived, as far as possible, that it may occasion the fewest rehearfals of the same thing; for it is not grateful to the hearers without evident necessity.

2. Have a care of tedious prelixity, or drawing out any part of your discourse to an unnecessary and tiresome It is much more honourable for an instructor, length. an orator, a pleader, or a preacher, that his hearers should say, I was afraid he would have done, than that they should be tempted to shew signs of uneafiness, and

long for the conclusion.

Besides there is another inconvenience in it; when you affect to amplify on the former branches of a difcourse, you will often lay a necessity upon yourself of contracting the latter and most useful parts of it, and perhaps

ul

y

ut

le

1/2

le

to

10

-

y.

e,

n

it

h

a

n

d

A

al

o

e

-

ut

28

٢,

S t

d

n

perhaps prevent yourfelf in the most important part of your design. Many a preacher has been guilty of this fault in former days, nor is the present age without

some instances of this weakness.

3. Do not multiply explications when there is no difficulty, or darkness, or danger of mistake. Be not foul of tracing every word of your theme through all the grammatical, the logical, and metaphysical characters and relations of it; nor shew your critical learning in spreading abroad the various senses of a word, and the various origin of those senses, the etymology of terms, the fynonymous, and the paronymous, or kindred names, &c. Where the chief point of discourse does not at all require it. You would laugh at a pedant who, professing to explain the Athanasian Greed, should acquaint you, that Athanasius is derived from a Greek word which fignifies immortality; and that the fame word, 'Asavaria, fignifies also the herb tansie.

There are some persons so fond of their learned diftinctions, that they will shew their subtilty by diffinguishing where there is no difference: and the fame filly affectation will introduce diffinctions upon every occurence, and bring three or four negatives upon every fubject of discourse; first to declare what it is not and then what it is: whereas such negatives ought never to be mentioned where there is no apparent dan-How ridiculous would that writer be, ger of miltake. who, if he were speaking of the Nicene creed, should declare negatively, r. That he did not mean the dostrine which the inhabitants of Nice believed; nor, (2.) A creed written by them; but, (3.) Politively a creed composed by several Christian Bishops met together in the city of Nice: the positive is sufficient here, and the two negatives are impertinent.

4. Be not fond of proving those things which need no proof; fuch as felf-evident propositions and truths univerfally confessed, or such as are entirely agreed to and granted by our opponents. It is this vain affectation of proving every thing that has led geometricians

Some

to form useless and intricate demonstrations to support fome theorems, which are fufficiently evident to the eye by inspection, or to the mind by the first mention of them; and it is the same humour that reigns sometimes in the pulpit, and spends half the sermon in proving some general truth which is never disputed or doubted, and thereby robs the auditory of more useful entertainment, but in terrait out the intent and show

5. As there are some things so evidently true, that they want no proof; fo there are others fo evidently falle that they want nor efutation. It is mere trifling, and a waste of our precious moments, to invent and raife fuch objections as no man would ever make in earneft, and that merely for the fake of answering and solving them: this breaks in notoriously upon the due brevity of method in compens, bother of winds

6. Avoid in general all learned forms, all trappings of art, and ceremonies of the school, where therewis no need of them. It is reported concerning the late Czar of Muscowy, that when he first acquainted himfelf with mathematical learning he practifed all the rules of circumvallation and contravallation, at the fiege of a town in Livonie; and by the length of these formalities he lost the opportunity of taking the dry definitions and divisions of Scheibler's combenepwort

. Do not Suffer every occasional and incidental thought to carry you away into a long parenthefis; and thus to Aretch your discourse, and divert you from the point in band. In the pursuit of your subject, if any useful thought occur, which belongs to some othersthenie, note it down for the fake of your memory on some other paper, and lay it by in referve for its propers place and feason: but let it not incorporate itself with your present theme, nor draw off your mind from your main bufines, thogh it should be ever so inviting. A man, who walks directly, but flowly towards his journey's end, will arrive thither much fooner than his neighbour, who runs into every crooked turning which he meets, and wanders aside to gaze at every thing

38

i,

93

18

13

5

9

3

fi

30

ib

to

0

2

q

83

ES 1b

r

3

ad

yo

thing that strikes his eyes by the way, or to gather? every gaudy flower that grows by the fide of the road, mol

To fum up all; there is an happy medium to be obferved in our method, so that the brevity may not render the fense obscure, nor the argument feeble, nor our knowledge merely superficial and on the other hand that the fulness and copiouiness of our method may not waste the time, tire the learner, or fill the mind with

trifles and impertinencies. spand and are and A. S.

The copious and the contracted way of writing have each their peculiar advantages. Their is a proper use to be made of large paraphrofes, and full, particular, and diffulive, explications and arguments; thefe are fittest for those who design to be acquainted throughly with every part of the subject. There is also a use of shorter bints, abstracts, and compendiums to inftruct those who seek only a slight and general knowledge, as well as to refresh the memory of those who have learned the science already, and gone through a larger scheme bet But it is at gross abuse of these various methods of instruction, when a person has read a mere compend or epitome of any science, and he vainly iniagines that he understands the whole science. So one boy may become a philosopher by reading over the mere dry definitions and divitions of Scheibler's compendium of peripateticism . So another may boast that he understands anatomy, because he has seen a skeleton; and a third profess himself a learned divine, when he can repeat the Apostles Creed. moy to miling shi al

VIth RULE. Take care that your method be proper to the subject in hand, proper to your present design, place and fealon: but let it not incorporate itielf.

Let your method be proper to the fubject. All fci? ences must not be learned or taught in one method." Morality and Theology, Metaphyfics and Logick will not be eafily and happily reduced to a strict mathematical method: Those who have tried have found much inwhich he meets, and wanders and eniored sonsingungs gnith

Some

Some things have more need to be explained than to be proved; as Axioms or self-evident propositions; and indeed all the first great principles, the chief and most important doctrines both of natural and revealed religion; for when the fense of them is clearly explained, they appear so evident in the light of nature or feripture, that they want no other proof. There are other things that stand in need of proof, as well as explication, as many mathematical theorems, and feveral deep control versies in morality and divinity. There are yet other forts of subjects which want rather to be warmly impressed upon the mind by fervent exhortations and stand more in need of this than they do either of proof or explication; such are the most general, plain, and obvious duties of Piety towards God, and love towards men, with a government of all our inclinations and possions. Now, these several subjects ought to be treated in a feveral different methodobontsom bas raniem travilla

Again, There are some subjects in the same treatise which are more useful and necessary than others, and some parts of a subject which are eminently and chiefly designed by a writer or speaker: true method will teach us to dwell longer upon these themes, and to lay out more thought and language upon them; whereas the same art of method will teach us to cut short those things which are used only to introduce our main subject, and to stand as a scassfolding merely to aid the structure of our discourse. It will teach us also to content ourselves with brief hints of those matters which are merely ac-

casional and incidental.

if you treat of the same subject with two different views and designs, you will find it necessary to use different methods. Suppose the doctrine of the sacred Trinity were your theme, and you were to read a lecture to young students on that subject: or if you designed a treatise for the conviction of learned men, you would pursue a very different method from that which would be proper to regulate a practical discourse, or a sermon

u

-1

t e s

.

Y

a I

1

to instruct vulgar Christians merely in the pious improvement of this doctrine, and awaken them to their duties which are derived thence.

In short, we must not first lay down certain and precise rules of method, and resolve to confine the matter we discourse of to that particular form and order of topics; but we must well consider and study the subject of our discourse throughly, and take a just survey of our present design, and these will give sufficient hints of the particular form and order in which we should handle it, provided that we are moderately skilled in the general laws of method and order.

Yet let it be noted here, that neither the Subject, nor matter of a discourse, nor the particular design of it, can fo precifely determine the method, as to leave no room for liberty and variety. The very fame theme may be handled, and that also with the same design, in feveral different methods, among which it is hard to iay which is the best. In writing a fiftem of divinity, fome begin with the fcriptures, and thence deduce all other doctrines and duties. Some begin with the Being of God, and his Attributes, fo far as he is known by the light of nature, and then proceed to the doctrines of revelation. Some distinguish the whole subject into the Credenda and Agenda: that is, to be believed, and things to be done. Some think it is best to explain the whole Christian religion by an historical detail of all the discoveries which God has made of himself to this lower world, beginning at the creation in the first chapter of Genefis, and fo proceed onward according to the narrative of the old and New Testament. And there are others that endeavour to include the whole of religion under these heads, (viz.) The Aposiles Creed, the Lord's Prayer, the Ten Commandments, and the two Sacraments; though I cannot but think this is the least accurate of any. The fame variety may be allowed in treating other subjects; this very treatife of Logick is an instance of it, whose method differs very considerably mortoper to regulate a practical discourse, of a fermon

from any others which I have feen, as they differ also greatly from one another; though several of them are confessed to be well written.

3. Though a just view of our subject and design may dictate proper rules of natural method, yet there must be some little difference at least paid to the custom of the age wherein we dwell, and to the humour and genius of our readers or bearers, which if we utterly reject and distain our performances will fail of defired success even though we may have followed the just rules of method. I will mention but this one inflance; in the former century it was frequent with learned men to divide their theme or subject into a great multitude of co-ordinate members or parts, they abound also in the forms of Logick and distinction, and indulged numerous ranks of fubordination. Now, though we ought not to abandon the rules of just method and division, in order to comport with the modifh writers in our age who have renounced them, yet it is prudent to pay for much respect to the custom of the age, as to use these forms of division with due moderation, and not affect to multiply them in fuch a manner as to give an early and needless disgust to the generality of our present readers. The fame may be faid concerning various other methods of conduct in the affairs of learning, as well as in the affairs of life, wherein we must indulge a little to custom: and yet we must by no means fuffer ourselves so far to be imposed upon, and governed by it, as to neglect those rules of method which are necessary for the fafe, eafy, and complete enquiry into truth, or the ready and effectual communication of at to true method; and though they belong chiefly teratto communication of knowledge, yet an early and chorough

VII. RULE. The last requisite of method is, that the parts of a discourse should be well connected; and these three short directions will suffice for this purpose.

let all the parts of your discourse have a tendency toward

ac

m

o

e

A

e

f

s

f

e

0

f

e

S

n

e

0

ċ

+

y

8

10

+

d

0

di

to

for

d

d

d

t,

it, and as far as possible make that tendency visible all the way: otherwise the readers or hearers will have reason to wonder for what end this or that particular was introduced.

2. Let the mutual relation and dependence of the feveral branch;s of your discourse be so just and evident, that every part may naturally lead onward to the next, without any buge chafms or breaks which interrupt and deform the scheme. The connexion of truths should arise and appear in their fuccessive ranks and order, as the feveral parts of a fine prospect ascend just behind each other, in their natural and regular elevations and diftances, and invite the eye to climb onward with constant pleafure till it reach the fky. Whatfoever horrid beauty a precipice or a cataract may add to the prospect of a country, yet fuch fort of hideous and abrupt appearances, in a scene of reasoning, are real blemishes and not beauties. When the reader is passing over such a treatife, he often finds a wide vacancy, and makes an uneafy ftop, and knows not how to transport his thoughts over to the next particular, for want of some clue for connecting idea to lay hold of

forms of transition from one part of a discourse to another, and practice them as occasion offers. Where the ideas, propositions, and arguments are happily disposed, and well connected, the truth indeed is secure; but it renders the discourse much more agreeable, when proper and graceful expression joins the parts of it together in so entertaining a manner, that the reader knows not how to leave off till he hath arrived at the end.

These are the general and most important rules of true method; and though they belong chiefly to the communication of knowledge, yet an early and thorough acquaintance with them will be of considerable use toward the pursuit and attainment of it.

Those persons who have never any occasion to communicate knowledge by writing or by public discourses, may also with great advantage perce these rules of method, that they may learn to judge with justice and accuracy concerning the performance of others. And besides a good acquaintance with method will greatly assist every one in ranging, disposing, and managing all human affairs.

The particular means or methods for a farther improvement of the understanding are very various, such as meditation, reading, conversing, disputing by speech or by veriting, question and answer, &c. And in each of these practices some special forms may be observed, and special rules may be given to facilitate and secure our enquiries after truth: but this would require a little volume by itself, and a treatise of Logick has always been esteemed sufficiently complete without it.

Finis.



of id ly ill

h

h

1,

e

S

## CONTENTS.

the second for all the second second

superior duration of styles and designation of the

ing original as an instruction of the fills

THE Introduction, or general scheme, Page	5
The First Part, viz. Of Perception and Idea	<b>.</b> .
CHAP. I. Of the Nature of Ideas,	12
CHAP. II. Of the Objects of Perception,	13
§ 1. Of Being in general,	13
§ 2. Of Substances and their various kinds, .	15
§ 3. Of Modes and their various kinds; and	
first of essential and accidental Modes,	20
§ 4. The farther divisions of Mode.	24
§ 5. Of the ten Categories. Of Substance mo-	
dified,	28
§ 6. Of Not-Being.	28
CHAP. III Of the feveral forts of perceptions or ideas,	30
§ 1. Of fentible, spiritual, and abstracted ideas,	30
§ 2. Of fimple and complex, compound and	•
collective ideas,	34
§ 3. Of universal and particular ideas, real and	
imaginary,	36.
§ 4. The division of ideas, with regard to their	3
qualities.	40
CHAP. IV. Of words and their feveral divisions,	
together with the advantage and	
danger of them.	46
5 1. Of words in general, and their we,	46

#### CONTEMNOTS.

§ 1. Of universal, particular, indefinite,	and 3
fingular propositions, a signal ic	
\$ 2. Of affirmative and negative proposition	ns. 1 141
§ 3. Of the opposition and conversation	of 4
propositions, op 5 the Japovine 10	
§ 4. Of pure and modal propositions,	
5 5. Of fingle propositions, whether simple	e or a
complex,	148
5.6. Of compound propositions, lessed .	7 9 100
§ 7. Of nature and false propositions,	1 3 155
§ 8. Of certain and doubtful propositions	of ->>
knowledge and opinion, Holar (O	.5 3 158
§ 9. Of fente, consciousness, intelligence,	rea- i
fon, faith and infpiration.	161
71. Speciel rales rolling ran John of	
CHAP. III. The springs of false judgment, or	the
doctrine of prejudices, gainte g dO	.1 3 168
§ 1. Prejudices arising from things, d 10	
\$ 2. Prejudices arising from words, barich	E & 176
§ 3. Prejudices arifing from ourselves,	
§ 4. Prejudices arising from other persons.	
Observacións concerning the definitential	Charles and the Control of the Contr
CHAP. IV. General directions to affift us in ju	ag-
Of a complete concept thights gair	
of division, and a carelogopal file of the control of	
CHAP. V. Special rules to direct us in judging	The second second
particular objects, flda to tone	223
§ 1. Principles and rules of judgment conce	
ing the objects of fenfe, a bank a	224
'§ 2. Principles and rules of judgment, in m	
defined in ters of reason and speculation,	
§ 3. Principles and rules of judgment, in m	at-é
ters of morality and religion,	232
§ 4. Principles and rules of judgment, in m	at-
ters of human prudence, bnoose	21 1236
§ 5. Principles and rules of judgment, in m	at
ters of human testimony,	239
§ 6. Principles and rules of judgment, in m	
ters of divine testimony, 127	243
§ 7. Principles and rules of judging concerni	
things past, prefent, and to come,	by
the mere use of reason.	**

#### CONTENTS.

5 2. Of negative and positive terms, of the	51
3. Of simple and complex terms,	SHOW THE STATE OF
4. Of words common and proper,	53 55
§ 5. Of concrete and abstract terms,	57
6. Of univocal and equivocal words,	57
7. Various kinds of equivocal words,	59
§ 8. The origin or causes of equivocal words.	65
448	
CHAP. V. General directions relating to our ideas,	68
6 1. Of acquiring a treasure of ideas,	68
6 2. Of retaining ideas in memory,	70
§ 3. Of selecting useful ideas,	72
5 4. Of the government of our thoughts.	73
CHAP. VI. Special rules to direct our conceptions	
iar. III. The forms of falle, spainta tot, or the	75
301 § 1. Of gaining clear and distinct ideas,	76
or § 2. Of the definition of words or names,	77
5 3. Direction concerning the definition of name	126 20 10
§ 4. Of the definition of things,	93
5 5, Rules of definition of the thing,	97
§ 6. Observations concerning the definitions of	100
7. Of a complete conception of things	
§ 8. Of division, and the rules of it,	107
5 19. Of a comprehensive conception of things,	109
and of abitraction, minoring	113
§ 103 Of the extensive conception of things,	3
and of distribution,	117
§ 11m Of an orderly conception,	121
12. Thefe five rules of conception exemplified,	
6 -13. An illustration of the five rules, by fimi-	
요. 5. (그 중 마니) : 그 그 그 그 그는 그는 그는 그를 가는 것이 다른 것이 되었다. 그는 그는 그는 그는 그는 그는 그를 가는 것이 되었다. 그를 가는 것이 없는 것이 없는 것이 없다.	125
4 4. Principles and rules of judgment, in mat-	
The Second Part, viz. Of Judgment and	
그 보다 보다 하다 그 나는 사람들은 사람들은 아이들은 사람들이 되었다. 그는 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은	129
ters of human religious.	
CHAP. I. Of the Nature of a proposition, and its	
feveral parts is solvible and	131
CHAP. II. Of the various kinds of propositions,	Hitter Control
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	134
the mere use of reason	40.5

#### CONTENTS.

### The Third Part, viz. Of Reasoning and Syllogism.

CHAP. I. Of the nature of a fyllogism, and of the parts of which it is composed.	250
CHAP. II. Of the various kinds of fyllogisms, with	
particular rules relating to them,	
§ 1. Of univerfal and particular fyllogifms, bot	253 h
negative and affirmative,	253
§ 2. Of plain simple sylle if us, and their rules,	254
§ 3. Of the moods and figures of fimple syllo-	
gifms,	258
§ 4. Of complex fyllogisms,	261
§ 5. Of conjunctive fyllogisms,	264
§ 6. Of compound fyllogisms,	269
§ 7. Of the middle terms, of common places or	
topics, and invention of arguments,  § 8. Of feveral kinds of arguments and demon-	272
frations.	275
CHAP. III. The doctrine of fophisms,	279
§ 1. Of feveral kinds of fophisms, and their	
folution,	279
§ 2. Two general tests of true fyllogisins, and	
methods of folving all fophisms,	287
777 0	
CHAP. IV. Some general rules to direct our rea-	
foning.	290
THE TOWN DOWN THE CONTROL OF THE CON	
The Fourth Part, viz. Of Method.	
The control of the co	
CHAP. I. The nature and kinds of method.	302
THE CANADA CASA CASA CASA CASA CASA CASA CASA C	1.3
Chap. II. General and special rules of method.	310
The said of the sa	42
A POLY	A See M

